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November 1985

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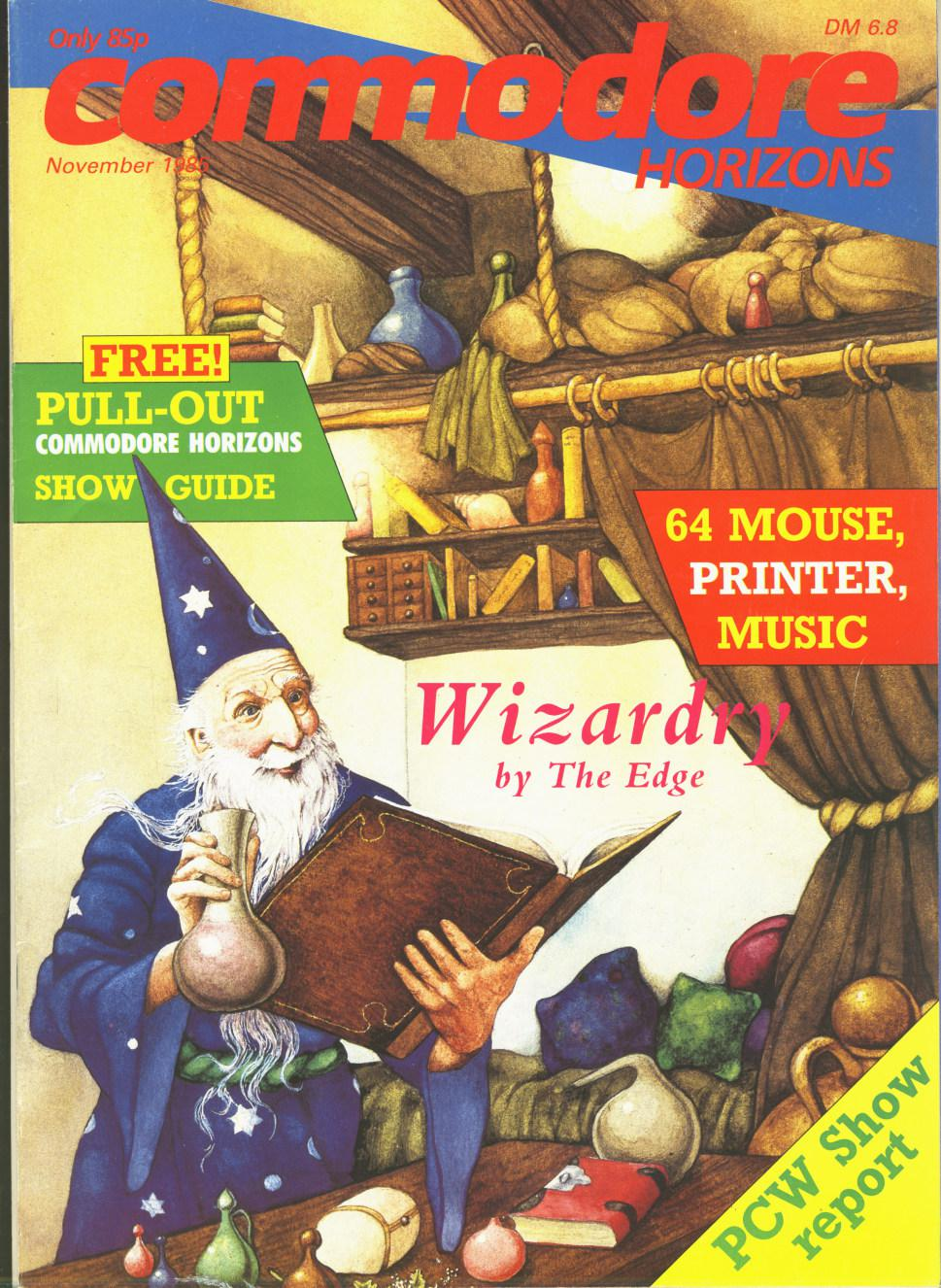
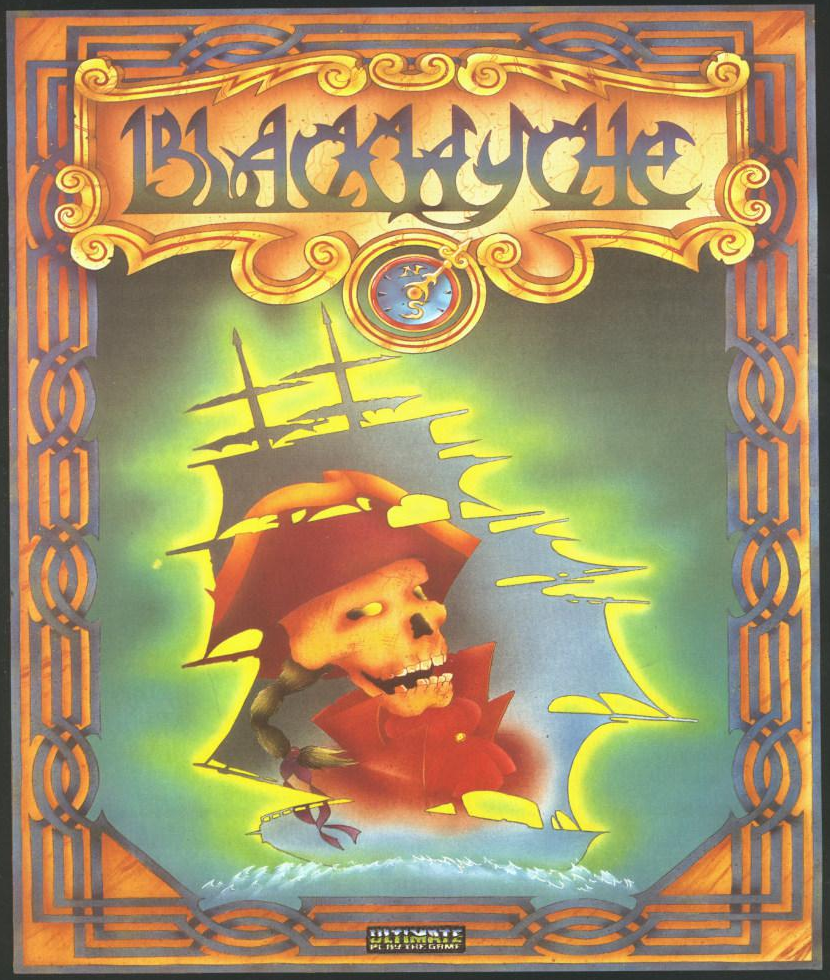


## *Wizardry*
*by The Edge*

**PCW Show report**

# COMMODORE 64

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## Editorial

THIS MONTH'S editorial is about things which aren't where you expect them to be. Lots of people expected the Amiga to be on Commodore's stand at the PCW Show, but instead it was in the Royal Kensington Hotel up the road. More on that in our PCW Show report on page 7. Many of you will be expecting the Commodore Horizons Show to take place in the Novotel, but, due to contractual problems, the venue has been changed.

The new venue is the **TECH WEST CENTRE**, Warple Way, Shepherds Bush, London W12. Tech West is a new exhibition facility in easy reach of Turnham Green tube, Acton Central BR station, and Uxbridge Road. There are also car parking facilities on site. Ticket prices, at £3 for adults and £2 for under sixteens (£2 and £1 in advance) remain the same, as do the times and dates, 10am-6pm October 26th and 27th (Saturday and Sunday). All existing tickets and stand bookings will be valid.

There will be a free bus service between the Novotel, Shepherd's Bush tube, and TECH WEST for anyone who turns up at the wrong venue. For any further enquiries about the Show, contact Commodore Horizons on 01-437 4343 or Howard Heath at Editionscheme, HR House, 447 High Road, Finchley, London N12, 01-346 6566.

## Next Month

Chrissy Prezzies!
The Editor fills his stocking

Prizes Galore!
Hardware and software to win

*Plus*
News, views and reviews


**EDITOR** Christopher Jenkins **PRODUCTION EDITOR** Barbora Hajek **EDITORIAL SECRETARY** Geraldine Smyth **GROUP ADVERTISEMENT MANAGER** David Lake **ADVERTISEMENT MANAGER** Simon Langston **MANAGING EDITOR** Brendon Gore **PUBLISHING DIRECTOR** Duncan Scot **TELEPHONE (ALL DEPTS)** 01-437 4343 **TELEX** 296275 SUNRGY **UK ADDRESS** Commodore Horizons, 12/13 Little Newport Street, London WC2H 7PP **US ADDRESS** Commodore Horizons, c/o Business Press Int'l, 205 East 42nd Street, New York, NY 10017 **SUBSCRIPTIONS** UK £10.00 for 12 issues, overseas surface (excluding US and Canada) £16.00 for 12 issues, US and Canada airlifted US$33.95 for 12 issues.

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ABC

**SUBMITTING ARTICLES** *Commodore Horizons* invites readers' contributions, either program listings or articles. Articles should be typed, double spaced with a wide margin. When possible programs should be submitted on cassette or disk with a printout on plain white paper. Please keep a copy of your submission — do not send your only copy. Please enclose an s.a.e. if you wish your submission to be returned. All submissions must be your own original work.

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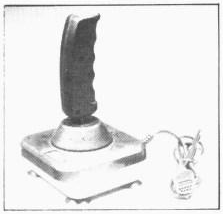

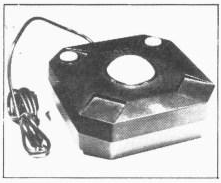

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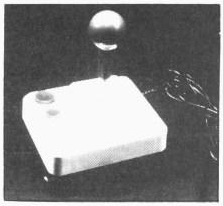

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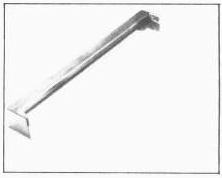

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# Mail Merge

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## Polish logic

I HAVE A big request to you. I have Commodore 65. Floppy and printer MPS802. In Poland I can not a programms for this Commodore to buy. I will be very happy if I can to find a friends, who me help will.

I can return to reciprocate send beautiful souvenirs from Poland. I will be very happy if you will published my letter in Commodore Horizons.

*Kasimierz Jaracz,*
*skrytka 12,*
*78-401 Szczecinek 3,*
*Poland.*

**A COMMODORE 65? What do the Poles know that they're not telling us?**

## Unlock the 64

I THOUGHT I'd let you know my method for recovering control of your 64 after a keyboard lock up. Firstly press the "shift" key and "CBM logo" key together. The screen should flash between the two modes very rapidly. Next press the "shift lock" key, and then press down as many keys as possible with the palms of both hands until the screen displays "loading" and "press play on tape". Press play, and then break out of the load with the "runstop" key. It might not be very elegant, but it works! (Well, it does on my 64 anyway.)

*S. Embury,*
*Stoke-on-Trent,*
*Staffs.*

## Horizons weakly

COULD YOU please tell me, why Commodore Horizons is published only once every month. I am sure there are many of your readers, like myself, who would like to read such a great magazine perhaps every fortnight.

*Graham Kidd*
*New Barnet*
*Herts*

**THANKS FOR the compliments! We'd love to publish every week, but our nerves wouldn't stand the pace. Try our esteemed sister publication, Popular Computing Weekly, which has plenty for the Commodore owner and should keep you amused while you're waiting for the next Commodore Horizons.**

## Auto-run defeated?

YOUR ARTICLE about Paging I liked very much. I managed to make an ANTI AUTO-RUN program which is printed here. Itll work with most A-R programs. To use it, first load the AA-R program and run it. Then load the auto-running program. Instead of running, the BASIC part of the program will list.

```
100 print"wait + — 2min."
110 for x=40960 to 49151
120 pokex,peek(x)
130 nextx
140 forx=57344 to 65535
150 pokex,peek(x)
160 nextx
170 poke1,peek(1)and253
180 poke788,194
190
poke40992,42651-int(42651/2
56)*256
200 poke
40993,int(42651/256)
210 print"finished"
220 new
```

*Michael Peters,*
*Mortsel,*
*Belgium.*

**WE HAVEN'T checked it out ourselves — but we'll take your word for it, Michael!**

## Cheatmode

HERE ARE a few useful game tips for the 64.

**Revenge of the Mutant Camels:** Whilst in play, press control and type GOATS. Now if you hit space or Runstop the next screen will appear.

**Zaxxon:** When the scores come up type RED this should make you invisible to the oncoming attack waves.

**Potty Pigeon:** Whilst on the title page, hit a number key to change levels.

*Richard Barron*
*Ellesmere Port, Cheshire*

## Superbase

IN THE October feature on Plus/4 software you made no mention of Superbase, which has been reviewed as the leading database on the 64 and runs in its upgraded form on the Plus/4. The price of Superbase on the Plus/4 and 64 is being reduced to £79.95 from 1st October 1985. Please let both your readers and John Cochrane know that Superbase is available on the Plus/4.

*Nigel Lovett-Turner*
*Precision Software*

FINK! WHATS THE MATTER?
NOW TAKE IT EASY FINK..
AAAAARRGGH!!
ZOOOMM!
IT'S HORRIBLE! A NIGHTMARE! I'LL SUE THEM! SUE! SUE! SUE! DISTORTED ME! TWISTED ME! GIVEN ME DEELY BOPPERS! THEY TORE OFF MY TAIL!
N. MURRAY 1985
IN THERE!
I MUST SEE THIS!
ROMPER ROOM
OH NO!

## Betting on the 64

BETTING FANS will be pleased to see the release of two Collins books which explain how to use your 64 to improve your performance.

**Football Pools with the Commodore 64**, and **Horse Racing with the Commodore 64**, are both by Frank George, ex-head of the Department of Cybernetics at Brunel University. Each book costs £7.95, and uses flow charts and simple Basic programs to apply principles of statistics and probability to the problems of picking winners.

The author has adopted programs produced on mainframe computers specially for the book, and the programs are available separately on cassette or disk. For more details contact Collins Books, 8 Graton Street, London W1X 3LA, 01-493 7070.

*Frank George puts his shirt on the 64*

# Ariola signs Minter

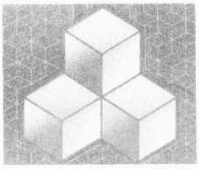
IN A SURPRISE announcement shortly after the PCW Show, Ariolasoft, top distributors of American games titles, revealed details of a marketing deal with Jeff Minter's Llamasoft.

*The young Minter — now into big busines*

The agreement means that selected Llamasoft titles will be packaged, advertised and marketed by Ariolasoft. The first such title will be the recently completed **Batalyx**, which will be available on disk for the 64 at £12.95 from October the 14th, and on cassette at £9.95 from October 28th.

Batalyx consists of six subgames, each based on favourite Minter themes. **Hallucin-o-bomblets** features arcade action with a fast-moving droid; **AMC II** is a follow-up to **Attack of the Mutant Camels**; **Syncro II** is a version of the program published in the October issue of *Commodore Horizons*; there's a **"Pause"** routine which is a subset of the light synthesiser **Psychedelia**; and the remaining subgames are **Iridis Base** and **Cippy on the Run**, featuring the creature from **Ancipital**.

Previewed at the PCW Show, Batalyx has already drawn interest from public and dealers alike. Ariolasoft MD Ashley Grey said of the marketing agreement, "We are delighted to be working closely with one of the UK's leading software houses."



Jeff Minter has been approached many times in the past to write games for other software houses, but up till now has declined. The Ariolasoft agreement leaves him free to continue producing games on the Llamasoft label, while providing what one industry source called "an unprecedentedly large" financial reward for lending his name to Ariolasoft.

# Horizons Show on in TECH WEST

THE COMMODORE Horizons Show in October is going ahead, but with a change in venue. Due to various contractual problems, the Show will no longer be held at the Novotel, Hammersmith. The new venue is the TECH WEST CENTRE, Warple Way, Shepherds Bush, London W12.

As planned, the Show will be held on Saturday 26th and Sunday 27th October, from 10am to 6pm. Tickets already purchased will be valid, and ticket prices remain the same. £3 for adults, £2 for under sixteens on the door, £2 and £1 in advance. All ticket holders will be sent details of the change in venue, and in case anyone turns up at the Novotel, there will be a free bus service from the Novotel to TECH WEST and back.

For any further details about the Show, you should now contact Howard Heath, Editionscheme Ltd, HR House, 447 High Road, Finchley, London N12 0AF, 01-346 6566. TECH WEST is a new development with excellent facilities, situated in Warple Way off Uxbridge Road. The nearest British Rail station is Acton Central; the nearest tube, Turnham Green. There are car parking facilities on site.

Exhibitors confirmed at the time of going to press include Anirog, Argus Press, Evesham Micro, Flight Link, Gultronics, ICPUG, Llamasoft, Martech, Microdeal, Precision, Robcom, Trojan, Vulcan Electronics, and many more. See the Show Guide in this issue for full details.

The commodore HORIZONS show

**How to get there By Underground:**

**Shepherd's Bush (Metropolitan Line)**
**Turnham Green (District Line)**

**By bus: 266, 714, 716, 290, 30, 72, 73, 74**

**26th/27th October 1985**

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**This voucher entitles the bearer to**

**50p OFF**

**the admission fee to The Commodore Horizons Show, applicable for one day only. To be surrendered on entry. Only one voucher per person may be used.**

# Prolog on the way

ONE OF THE most powerful programming languages yet developed, Micro Prolog, is to be available on the 64. Logic Programming Associates, best known for work in artificial intelligence and MS/DOS software, has developed a version of Prolog for 6502-based machines including the 64.

LPA's Keith Clarke and Frank McCabe plan to launch the package on September 1st at £69.50 plus VAT. The package comes complete with a ring-bound manual and a copy of the book *Starting Problem Solving with Prolog*.

Prolog, the language adopted for the Japanese fifth generation mainframes, is designed to use facts and rules to solve problems in a logical way. The LPA version is claimed to be a complete implementation.

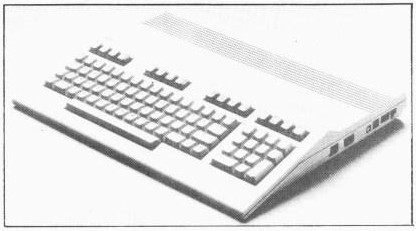
For more details contact LPA, Studio 4, Royal Victoria Patriotic Building, London SW18 3SX, 01-871 2016.

# 128 delay — C16 to go?

COMMODORE'S C128 has been delayed, and speculation as to the fate of the C16 and Plus/4 has increased. Following the PCW Show, where public reaction to the new machines from Commodore, Atari and Amstrad enabled the marketing men to judge the state of the industry, the C128 launch has been delayed until the end of September so that a cheaper disk drive can be developed.

The new disk drive, the 1570, is a single-head high speed unit, designed to compliment the more expensive double-head 1571. The 1570 will sell at £199, as opposed to the 1571's £299. This means that the C128/1570 combination will sell for £468, £70 more than the price for the Amstrad 6128, which also includes a colour monitor.

Meanwhile, speculation mounts that the C16 and Plus/4 have had their day. At a PCW Show which saw very little in the way of new software for the machines, Commodore's marketing and sales manager Paul Welch was quoted as saying "I don't think there will be any Plus/4's or C16's available after Christmas — by then we will have built out all our remaining component stocks." This confirms doubts over the C16 and Plus/4 prompted by widespread High Street discounting and poor software support, but contradicts Nick Bessey's statement on Thames TV's Database programme that "The C16 and Plus/4 are alive and kicking — we're just concentrating on the C128 this year."



Chain stores such as Dixon's and Lasky's are offering attractive deals on the Plus/4 at the moment; Plus/4, datasette, joystick and software ten-pack for £99, or Plus/4, 1551 fast disk drive, MPS803 printer and business software package for £299.

# PCW Show: promises, promises!

***Chris Jenkins** looks at the Olympia show which, despite an excellent audience, featured lots of previews but little in the way of products*

THE PERSONAL Computer World Show, held at London's Olympia from September 4th-8th, was more remarkable for what wasn't there than for what was. The gratifying large crowds — estimated as high as 70,000 — flocked in to see the C128, the Atari 500St, and the new machines from Amstrad; but the big talking point was Commodore's Amiga, which was notably absent from the Commodore stand.

The show — divided into a business section in Olympia 2, and a home section in the National Hall — was packed with razzmatazz including Rambo lookalikes, video-displays, dancers, music shows and, inevitably, hundreds of computers.

Commodore's stand included a good dozen C128's, running 64 software and CP/M programs. But there was no sign of the 128D, the version with a built-in disk drive, though the machine is said to be on schedule for a possible release at Christmas. Price will be around £500, according to Commodore's sales and marketing manager Paul Welch.

The C128 aroused great interest from potential purchasers, keen to compare it to Atari's 520ST and Amstrad's CPC6128 and PCW8256. Apart from running existing 64 software such as Melbourne House's **Way of the Exploding Fist**, the C128 was seen running the program **Micro Clerk**. 64's were linked up to Compunet, and, in one of the most interesting previews of the show, running Music Sales' latest products. These include the **Sound Sampler**, with the latest menu-driven Mac-style software. The Sampler can digitise and replay sounds at a wide range of pitches, create echo and harmonising effects, and produce waveform plots. It's MIDI compatible, and is due in the shops before Christmas. Also on the way from Music Sales is an **FM Voice Module** for the 64, which, at £99, gives the same sort of musical effects as a £700 synthesiser such as Yamaha's DX21. The realistic sounds are eight-note polyphonic, can be split with different sounds at different ends of the keyboard, and can be accompanied by a range of automatic rhythms and riffs. The sounds are preset, but sound edlting software is also on the way. The next program will be a sequencer package for the MIDI-compatible FM module. Demonstrator Richard Watts

also showed a four-octave full-size music keyboard, to be priced at £69, though the FM module can also be played with the £29 **Music Maker** keyboard.

Commodore's biggest draw, the Amiga, was absent from the main stand — perhaps because it would have overshadowed the C128, and is, in any case, not due until next year. Trade and press visitors were shown the machine both in Metacomco's hospitality suite, and in an official Commodore demonstration in the Royal Kensington Hotel.

## Amiga

Here, Commodore's Gail Wellington and Chris Kaday put the machine through its paces and answered technical and marketing queries. Demonstrations included hi-res graphics displays of almost photographic quality; multitasking; IBM software emulation (with the promise of an inexpensive add-on to provide total high-speed emulation shortly); sound sampling; synthesised music; animation; video interfacing (superimposing computer images over signals from a video-camera); mouse control and command line interface; and so forth. A videotape of the American launch included demonstrations of the Amiga playing accompaniments for a saxophonist, speaking, displaying animated graphics of a ballerina, and more. The assembled cognoscenti were "well blown away", in the words of one journalist.

On the software wide, the PCW Show was more a case of the PCW preview; very few

*With no finished games to show, System 3 decided to go for the tacky display award . . .*

products were finished, though many were promised.

**Ariolasoft's** giant videodisplay dominated the gallery, and their latest releases **Karateka, Stealth,**

*Commodore's PCW Show stand drew excited crowds to see the C128*

**Dr Creep** and **Racing Destruction Set** were playing. The company is diversifying into utility programs, and forthcoming products include **PaperClip**, the popular word processor from Batteries Included, and a range of database, business graphics and interfacing products.

**US Gold** previewed an enormous range of titles including **The Goonies**, based on the forthcoming Steven Speilberg film, **Donald Duck, Kermit, Zorro, The FBI**, and **Desert Fox**.

**Ocean** showed clips from the film **Rambo**, but of the game there was no sign.

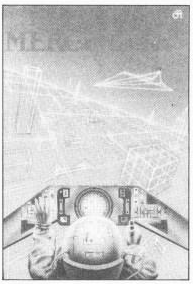
**Melbourne House's Lord of the Rings** was similarly there in film form only.

**Activision's** Autumn titles were up and running, and some Winter games were previewed, including **Alter Ego**, a "life simulation" game, and **Fast Tracks**, a slot car racing program. congratulations to Activision's gorgeous Clare Trotter, who took the Saturday off to get married . . .

**Anirog** previewed a business package and compiler for the 64, and a range of peripherals including a mouse, a disk cutter, and a range of dust covers.

**Argus Specialist Press** announced the closure of six of their computing magazines, and on a brighter note their Software wing showed a new game from Quicksilva, **Schizofrenia**.

**Beyond** previewed **Enigma Force**, a sequel to **Shadowfire** including more sophisticated animation and music, and **Superman**, the game of the film of the comic book.



*Novagen's no-show . . .*

*and CBM's sound of music*

**Domark** presented the £25,000 prize for solving **Eureka!**, and previewed the 64 version of **Codename MAT 2**.

**Firebird** showed the Telecom version of MUD, and demonstrated the **Island Logic Music System** for the 64, which Firebird has just licensed. The 64 versions of Ultimate's **Sabre-Wulf** and **Underworlde** were also shown.

Llamasoft, with our very own Jeff Minter, put on the usual awesome display, featuring the latest 64 title **Batalyx**. This multi-phase extravaganza defies description in such a short space, so we'll save it for later . . .

**Martech** previewed **Zoids, Geoff Capes Strongman Challenge**, and **Crazy Comets**.

Novagen's Mercenary, the long-awaited follow-up to **Encounter**, failed to appear again . . .

**Ocean's** licensing department had a field day, with clips of **Rambo, Transformers, Knight Rider** and so forth, but no actual games . . .

**Orpheus** previewed **The Young Ones, Tujad, Electrosound 64** and **CAD 64**.

And on the business software front, Precision launched the C128 versions of **Superscript** and **Superbase**.

New Commodore peripherals were remarkably thin on the ground, with only **Robcom's** revolutionary **Turbo** cartridges offering any excitement. There weren't even any decent joysticks . . .

On the whole, the PCW Show itself was a success. So far as Commodore and Commodore micro owners were concerned, Amstrad and Atari tended to steal most of the glory. if the Amiga had been on public show, the story might have been different — but the wonder machine will have its day soon.

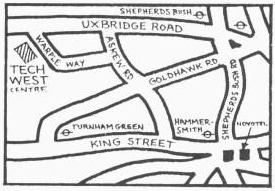
# This is the one for you

# The commodore HORIZONS show

**Saturday 26th and Sunday 27th October**
10am-6pm

Tech West Centre
Warple Way
Shepherds Bush
London W12

## Events • Competitions • Advice • Bargains




## NEW VENUE!

Complimentary buses from Shepherds Bush and Novotel.

**Tubes: Shepherds Bush, Acton Central, Turnham Green.**

We're organising a weekend of fun, information and bargains. There will be events for everyone to join in, advice centres to answer all your questions, competitions with great prizes, discount schemes and personalities.

We're providing extra catering and rest areas for those tired exhibition feet.

### *Plenty of bargains*

We're encouraging all our exhibitors to bring lots of bargains and special offers for you.

### *A show with pedigree*

The Commodore Horizons show is sponsored by Sunshine Publications, (publishers of your favourite Commodore magazine and Popular Computer Weekly) and Computer Marketplace Ltd., organisers of the Acorn User, 6809 Colour and Amstrad User Shows. So you can be sure its going to be a great show.

### *Miss the queues, save money. Win a Koala Touch Pad*

Use the coupon below and not only will you get into our 'fast' lanes and miss the queues but you save £1 per ticket as well. You also enter the prize draw and could win a Koala Pad Touch Tablet too!

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Please send _____ Adult tickets at £2 and _____ under sixteen tickets at £1 for 'Commodore Horizons Show'.
I enclose cheque/P.O. to the value of £_____ payable to Editionscheme Ltd.

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# Evesham Micros

## THE UTILITY SPECIALISTS

### FREEZE FRAME

**THE NEW GENERATION OF BACKUP METHODS HAS ARRIVED**

**"Freeze Frame"** is the product that 64 owners have been waiting for. As the flick of a switch, **"Freeze Frame"** will take control of your computer and freeze the program in memory, allowing you to **SAVE it to tape or disc**. The uses are endless, but typical applications are:

**TAPE TO DISC: ANY program** can be frozen and **transferred to disc** regardless of the type of loading technique used. (Disc Save incorporates a fast loading system.)

**DISC TO TAPE: ANY memory resident** disc program can be backed up onto tape. (Choice of normal or turbo save speed.)

**DISC TO DISC:** It is possible to make a self contained back up of disc based programs that will both **load at high speed** and **allow the rest of the disc to be used as normal**.

**TAPE TO TAPE:** Tape back ups can be made at turbo speed with just one tape deck.

In fact **"Freeze Frame" will FREEZE any program** that is in memory. Unlike the saved versions to make a back up of that program onto tape or disc. The backup being made is **completely** automatic, no knowledge of BASIC or machine language is required. Just follow the prompts and the simple instructions for **100% success**.

**"Freeze Frame"** is a hardware "device" that plugs into the cartridge port of the 64. It does **NOT** dump the entire contents of memory, just the **working program**. Programs converted run **independently** of the hardware.

**ONLY £39.95**

**WARNING:** Don't be mislead by other adverts, if you want to transfer turbo load programs to disc, software only utilities are **inadequate**. They suffer from a variety of drawbacks including poor success rate, awkward to use, greedy on disc space and complexity.

### DOUBLER

**The tape back up "device"**

Doubler has been an **enormous success** and continues to sell very well. Why? Because it is the **best product of its type** on the market. Doubler uses a unique method that copies **all types of software** regardless of type of loading technique used. Disc save incorporates a fast loading system.

Doubler creates a **brand new machine copy**. It is very easy to use and very successful. In fact our tests **have proved** that this "device" can achieve **100% success**.

Requires access to two data recorders.

**ONLY £12.95**

**Why settle for less—this is the best.**

### HARDWARE SPECIALS

**STAR SG10C**
**The ultimate Commodore ready printer. 120 cps or 40 cps in near letter quality mode. Friction and tractor feed.**

**MPS801 PRINTER** **ONLY £249.00**
**Popular printer at a stunning price.**

**MPS803 PRINTER** **ONLY £99.95**
**Exceptional print quality for the price.**

**1541 DISC DRIVE** **ONLY £139.95**
**Look at this price, it is not a misprint.**

**DISC NOTCHER** **ONLY £99.95**
**Handy new tool allows you to punch a second write protect notch in your discs. Double your disc capacity by using both sides of your discs.**

**ONLY £9.95**

### DISC DISECTOR V3.0

Now the ultimate disc copying and utility program for the C64 64 with 1541 disc drive has been **improved even further**. As well as general improvements plus the addition of some useful utilities two important new programs have been added.

**The Evesham Nibbler**
This is the first copier of its kind to appear on the U.K. market. It is the first copier to fully copier that will copy **ALL** of its **true nibbles automatically**. This includes 1 to 42 tracks, extra tracks, non-standard sectors, **extra long tracks**, extra short tracks, 29 no. plus non standard sectors etc. They are all copied automatically. No knowledge is required at all. It just does it all in normal work. No other copier can do this. Yes it **only nibbles away** and produces a perfect copy. Yes it **only takes eight minutes** to copy a disc. Yes copies **all disc tested** in one pass. A **class above** anything else available.

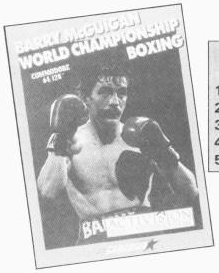
**Fast File Copier**
An **incredibly handy** sector/sector file copier that LOADs and SAVEs in **five times** normal speed. Sounds useful? You won't believe how much until you have used it.

**Fast Disc Utilities** The following **Fast Format** routine, **Fast Backup** routine, **Fast Backup** routine, **Fast File Copier** routine, **Improved DOS commands** routine, **Fast File Copier** routine, **Improved DOS commands** routine, **Fast File Copier** routine, **Improved DOS commands

Charts

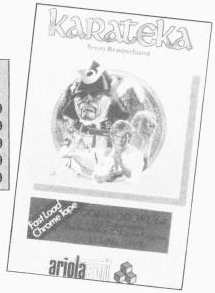
# Top Twenty CBM 64 Games

| | | | |
|---|---|---|---|
| 1 | (–) | Summer Games 2 | US Gold £9.95 |
| 2 | (–) | Beach-head 2 | US Gold £9.95 |
| 3 | (–) | Way of the Exploding Fist | Melbourne House £9.95 |
| 4 | (–) | Skyfox | Ariolasoft £11.95 |
| 5 | (4) | Frankie Goes to Hollywood | Ocean £9.95 |
| 6 | (2) | Hypersports | Imagine £9.95 |
| 7 | (3) | Elite | Firebird £14.95 |
| 8 | (–) | Clumsy Colin | Mastertronic £1.99 |
| 9 | (–) | Kikstart | Mastertronic £1.99 |
| 10 | (–) | Now Games | Virgin £8.95 |
| 11 | (–) | Finders Keepers | Mastertronic £1.99 |
| 12 | (6) | Softaid | Softaid £4.99 |
| 13 | (–) | Rescue on Fractails | Activision £9.99 |
| 14 | (9) | Gooch's Test Cricket | Audiogenic £9.95 |
| 15 | (13) | Thing on a Spring | Grenlin £7.95 |
| 16 | (19) | Dambusters | US Gold £9.95 |
| 17 | (5) | Pitstop 2 | US Gold £9.95 |
| 18 | (–) | Nodes of Yesod | Odin £8.95 |
| 19 | (–) | Cylu | Firebird £2.50 |
| 20 | (–) | Speedking | Digital Integration £9.95 |




## Bubblers

| | | | |
|---|---|---|---|
| 1 | Barry McGuigan's Boxing | Activision | £9.99 |
| 2 | Tour de France | Activision | £9.99 |
| 3 | Karateka | Ariolasoft | £9.99 |
| 4 | Nick Faldo's Open Golf | Argus | £9.99 |
| 5 | Great American Road Race | Activision | £9.99 |




# Top Five C16 Games

| | | | |
|---|---|---|---|
| 1 | (–) | Formula 1 Simulator | Mastertronic £1.09 |
| 2 | (–) | Daley Thomson's Star Events | Ocean £7.95 |
| 3 | (2) | BMX Racers | Mastertronic £1.09 |
| 4 | (–) | Spectipede | Mastertronic £1.09 |
| 5 | (–) | Airwolf | Elite £7.95 |

## Bubblers

| | | | |
|---|---|---|---|
| 1 | Vegas Jackpot | Mastertronic | £1.99 |
| 2 | Cruncher | Mastertronic | £1.99 |
| 3 | Suicide Run | Mastertronic | £1.99 |

# Top Five Vic 20 Games

| | | | |
|---|---|---|---|
| 1 | (2) | RIP | Mastertronic £1.99 |
| 2 | (1) | Rockman | Mastertronic £1.99 |
| 3 | (4) | King Tut | Mastertronic £1.99 |
| 4 | (–) | Doodlebug | Mastertronic £1.99 |
| 5 | (–) | Vegas Jackpot | Mastertronic £1.99 |

## Bubblers

| | | | |
|---|---|---|---|
| 1 | Psycho Shopper | Mastertronic | £1.99 |
| 2 | Phantom Attack | Mastertronic | £1.99 |
| 3 | Laser Zone | Llamasoft | £5.95 |

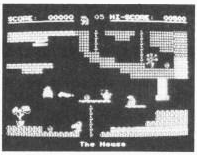
Data compiled by Gallup from a panel of specialist and chain stores, for the month ending September 7th.

# Mole in a hole

Aaaaargggg! Not yet another **Monty Mole** ladders-and-platforms effort! Well, it is, but there are a few mitigating factors which make Monty on the Run a little more tolerable.

Firstly, there's an astonishing music score. I've already taped it and play it continually on my Walkman — there's an intro theme, manic game theme, an end title, and variations throughout the game including a loony Eastern riff which will get your feet tapping. All this is done in what sounds like much more than three part harmony; absolutely incredible.

As for the game — well, what can you say? If you like this sort of thing, you'll find the usual steamhammers, weebly animals,



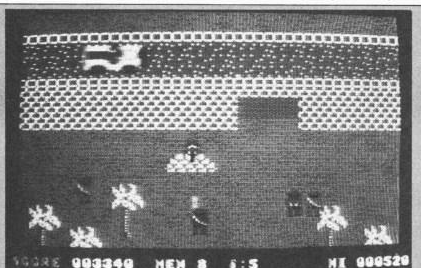

pools of acid, hidden treasures, slideways, ropes, and so on and so forth. If this isn't you sort of thing, or if you get fed up of **Wanted, Monty Mole** or **Monty is Innocent**, you won't find much that's new or exciting as Monty somersaults his way through this latest adventure. But that music...!

**Program:** Monty on the Run, 64
**Supplier:** Gremlin Graphics
**Price:** £8.95
**Graphics:** ★★★★★
**Sonics:** ★★★★★★★★
**Gameplay:** ★★★★★

# Blood and guts

Originally, and perhaps more graphically, entitled **Death or Glory**, Who Dares Wins looks like Alligata's best effort for some time.

The pre-production copy we reviewed was full of excitement despite being obviously unfinished. Who Dares Wins resembles the arcade game **Commando**, though it's by no means a copy. The screen scrolls downwards, showing a landscape of trenches, emplacements, pill-boxes and fortresses, which you as the lone hero, must




penetrate.

Your little man can move, shoot and throw grenades in eight directions, as can the opposition. The graphics and animation are in a nice "carton" style, and the backgrounds quite well detailed.

As you shoot your way through the zones, boxes of grenades can be found if you look around carefully. Without the grenades it's hard to dislodge some of the defenders, who are dug into various trenches and emplacements. There are also mortars and bazookamen to bar your progress.

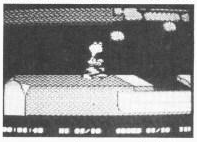
As each zone is finished there's an enormous fire-fight to get through the gate to the next zone.

Great fun — I look forward to seeing the finished version.

**Program:** Who Dares Wins, 64
**Supplier:** Alligata
**Price:** £7.95
**Graphics:** ★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★★

# Wobbly bits

Tony Crowther's latest effort — "Loco 4", as some wits would have it — is in fact more of an "arcade adventure" than any of his previous shoot-'em-up programs. Unfortunately, arcade adventure doesn't seem to be Tony's forté. About the only imaginative part of **William Wobbler** is the



eponymous hero, a sort of elongated ET with a head which seems to move independently of his body.

As William makes his way around a series of underground caverns, he has to duck or leap to avoid flying frogs and wriggling snakes. These, and other hazards such as lakes and razor blades, can make him lose his head in spectacular fashion.

There are ten clues to find, and collecting them all will give you a solution, which can be stored on a disk (provided with the disk or cassette versions of the game) and submitted for the £1000 competition. What's the prize? Tony isn't saying. Not much cop, I'm afraid.

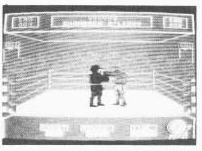
**Program:** William Wobbler, 64
**Supplier:** Wizard
**Price:** £12.95 cass, £14.95 disk
**Graphics:** ★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★

# Fezagood boybarry

I'm pretty fed up with sports simulations generally, and especially those endorsed by gormless sportsmen, but I forced myself to play Barry McGuigan's World Championship Boxing, and grudgingly admit that I liked it.

Apart from the fact that it's a good fight simulation, it also adds the elements of training and fighter characteristics which lend an extra dimension to the game.

There are five styles of boxing to contend with; dancers. sluggers, bulldogs, and so on. In choosing your opponent from the range available, you can tailor your training program to build your stamina, agility and strength as appropriate. In the fight sequence, your punches and defences are controlled with the joystick, and your remaining energy is indicated at the side of the screen. The sound effects and crowd reactions are excellent, and the thud of a solid blow is very satisfying. Points are racked up eact time you hit your

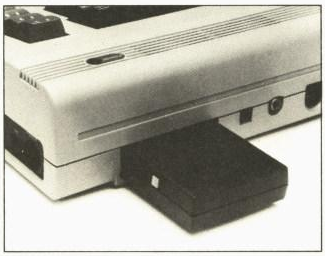


opponent, but punching wildly will sap your own strength.

There are nineteen boxers to take on, and obviously the higher in the points table they rank, the harder they are to beat. So far I've spent more time examining the canvas than anywhere else, but I'm working on it. Excellent fun — the "Exploding Fist" of boxing simulations.

**Program:** Barry McGuigan's World Championship Boxing, 64
**Supplier:** Activision
**Price:** £9.99
**Graphics:** ★★★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★★★

# THE SECRET BEHIND THE NEW COMMODORE 64



We'd like to let you into a secret.

Plug a Robcom TurboSeries cartridge into the back of your Commodore, and you'll have the ultimate 64.

More speed: the Turbo 50 above loads and saves at least 10 times as quickly as normal from cassette and five times as quickly from disk.

More power: there are 16 new tape and disk commands (including file copy) plus 8 new function keys, and a Centronics interface means you can use non-Commodore printers.

It's easier to use, too – 'Toolkit' simplifies Basic writing, and there's a powerful machine-language monitor aid.

There's a Reset button, too, that puts the computer back to square one without unplugging.

And much more.

Yet it's all done without using a single byte of the 64's memory – and you can leave the cartridge permanently fitted.

As a bonus, there's even a head alignment cassette for error-free loading.

Just a few of the features that'll make your Commodore faster, easier to use and a lot more versatile.

You'll find all five models at your local computer store, where depending on the features you want, prices range from the Turbo 10 at just £24.95 to the Turbo 50 at £39.95.

Not a lot to pay to own the ultimate Commodore 64.

ROBCOM

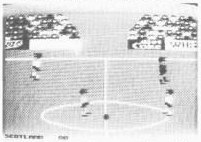
Turbo Series

ROBCOM LTD, 36 Market Place, London NW11 6JP. Tel: 01-209 0118.

# Kicked into touch

I don't see the point in this game. For a start, Commodore has sold so many copies of **International Soccer** that I can't believe there's any more market for a football simulation. Secondly, **World Cup 2** doesn't even try to make an improvement on the standard set by International Soccer, apart from having an irritating theme tune which is better enjoyed by switching it off.

The players, blue and yellow



(you can't change the shirt colours) represent any of twenty or so teams competing in the World Cup. One player can take on the computer, or you can play with up to eight human beings.

The graphics and animation are OK but no more, and the movement logic for the players isn't up to much at all — half the time, they just stand there as if it was half-time and they're already sucking their lemons. Control is of the player nearest to the ball, and shirt colour changes to indicate posession (familiar?) The FIRE button serves to pass or shoot, change the player controlled, or make the goalkeeper dive. There are automatic throw-ins, goal kicks, and so on.

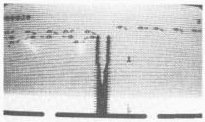
A peculiar game to release at this stage — something original next time, Artic?

**Program:** World Cup 2, 64
**Supplier:** Artic
**Price:** £6.95
**Graphics:** ★★★★★★
**Sonics:** ★★★★★
**Gameplay:** ★★★★★

# Plant life

Audiogenic are understandably reluctant to push the merits of their C16 titles — claiming that they are "as much an advance in software terms as the C16 was over the 64 in hardware". Still, with Commodore on the verge of killing the C16 it's marvellous to see anything coming out for the poor little micro.

**Kaktus** can claim, if nothing else, the month's most bizarre scenario; a horde of giant wasps is attacking a desert cactus, and only you can stop them. Your little man moves through underground tunnels, surfacing to



shoot at the wasps and larger, more dangerous hornets. Additional dangers include moles and wasp droppings (huh?), and on later screens an enraged buzzard.

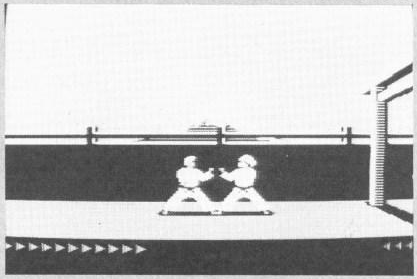
The product of a deranged mind. Approach with caution.

**Program:** Kaktus, C16
**Supplier:** Audiogenic
**Price:** £4.50
**Graphics:** ★★★
**Sonics:** ★★★★
**Gameplay:** ★★★★

# Karate killers

Fine graphics and a brilliant filmic storyline and soundtrack make **Karateka** a remarkable game. Though the beautiful hi-res graphics no longer look as outstanding as they did when the game came out in the States, they're still very striking. You play a karate-chopping hero, who sets out to rescue his beloved from the castle of an evil warlord. The combats with progressively tougher baddies are punctuated with cartoon-like sequences showing the weeping princess and the sinister warlord.

The combat sequences are



exciting as you use the joystick to choose high, middle or low chops or kicks. A bar chart at the bottom of the screen shows your remaining strength.

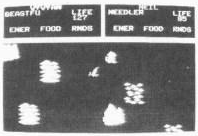
Comparisons with **Way of the Exploding Fist** are inevitable. Well, Karateka's graphics are better, but there are fewer possible moves and the play is slower. Karateka has a wider range of problems to solve; a vicious hawk, a dangerous portcullis, an impassable portal, and so on. The cassette version suffers from having to be reloaded after each game. Otherwise, Karateka is well worth playing. Run out and get it chop-chop.

**Program:** Karateka, 64
**Supplier:** Ariolosoft
Price: £9.95
**Graphics:** ★★★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★★★

# D.I.Y. monster kit

More jolly violent fun from Ariolasoft in the form of a do-it-yourself monster kit. **Mail Order Monsters** allows you to create a fighting monster, then pit it against the creations of another player, or the computer, in a battle to the death.

The whole program is joystick driven. You start by selecting a basic "morph" —




tyrannosaurus, lionbear, humanoid, or whatever — each of which are charmingly illustrated on the display. You can then allocate features such as strength, intelligence, speed, and stamina, and equip your monster with weapons.

There are several battle options, you can fight an opponent face-to-face, battle to collect flags which are guarded by hostile monsters, or collaborate against a horde of enemies. In each case the battle takes place in a dissapointingly plain landscape, magnified from part of the battle map when opposing monsters collide. Combat is controlled by selecting weapon and defence options from a menu as you fight.

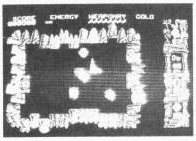
Nice idea, a little let down by the combat scenes — couldn't we have had giant sprites a la **Exploding Fist**, fighting in a more realistic way?

**Program:** Mail Order Monsters, 64
**Supplier:** Ariolosoft
**Price:** £14.95
**Graphics:** ★★★★★★
**Sonics:** ★★★★
**Gameplay:** ★★★★★★★

# Mage in a maze

Some time ago there was a Spectrum game called **Atic Atac**, by Ultimate. At the time Ultimate were thought to have supernatural powers, because the quality of their graphics and the complexity of the programming were outstanding.

I don't think Bubble Bus will be too upset if I compare Wizard's Lair to Atic Atac, because it's meant as a




compliment — and in any case, the games are so similar that the comparison is unavoidable.

You control the blobby hero, Pothole Pete, around a labyrinth of caves, seen from above. The action is fast and the design of the cave and its denizens nicely detailed.

There are keys and spells to be collected, which help Pete to get through otherwise unpassable doors, and various weapons which help to ward off the ghoulies.

There are also lifts, tunnels and passages which enable Pete to move from one level to another in his search for the four pieces of the Golden Lion, without which he can never escape from the Wizard's Lair.

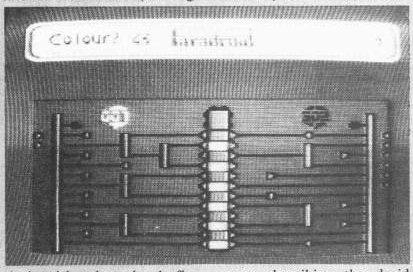
Good fun, though not remarkable.

**Program:** Wizard's Lair, 64
**Supplier:** Bubble Bus
**Price:** £7.95
**Graphics:** ★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★

# Paranoid android

An excellent bit of programming doesn't automatically produce an excellent game, and I think this bit of folk wisdom is well illustrated by **Paradroid**.

You control a robot, teleported onto a spaceliner full of wayward androids. Your job is to destroy them all and relaese the crew from the bridge where they're imprisoned. Since your energy supplies are limited, you must transfer control from one droid to another if you are to complete your mission. This you do by putting your droid into Transfer mode (centring




the joystick and pressing the fire button) then bumping into the next droid you find.

Once you do this, a fact screen describing the droid you're taking over appears, and you have to solve a quick-moving pattern matching puzzle to transfer control before your circuits blow out.

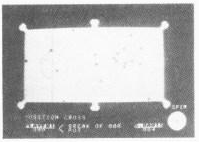
Extra features include maps of the spaceliner, lasers to zap berserk droids, various status reports and excellent sound effects. Like Beyond's **Shadowfire**, the great strength of Paradroid is in its still graphics; once you try to play the game, it becomes a little repetitive. Still, worth checking out.

**Program:** Paradroid, 64
**Supplier:** Hewson
**Price:** £7.95
**Graphics:** ★★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★★

# Steve snookered

It seems late in the day to come out with another snooker simulation, and I'm not sure if the endorsement of Steve "Interesting" Davis will be enough to make CDS's game stand out. Still, it is a well-programmed effort, controlled by joystick or keys through a series of icons.

The opening screen enables you to select the player options,



change the screen colour, call up the help screen, select single shot option or start the game.

Direction and force of your shots are determined by setting a bar graph, placing a target cross and adjusting a "spin" indicator. Once you hit the white, balls fly everywhere, accompanied by unrealistic crashing noises. Movement seems to be accurate as far as angles are concerned, but velocity is dodgy — sometimes the balls take far too long to come to rest. There's an edit facility which lets you set up the screen however you want to practice shots, and a number of skill levels.

On the whole, very... interesting.

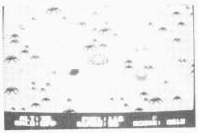
**Program:** Steve Davis' Snooker, 64
**Supplier:** CDS
**Price:** £8.95
**Graphics:** ★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★

# The Max Factor

US Gold's latest heads-down no-nonsense mindless shoot-'em-up is excellent fun, though requiring very little in the way of strategy or planning.

**Blue Max 2001** is what its title suggests; a futuristic follow-up to the First World War epic **Blue Max**. In this latest incarnation, programmed by Bob Polin of Synsoft, you pilot a powerful saucership across a hostile landscape. The screen scrolls from top left to bottom right, and your ship can move up and down, and in eight directions. You can also fire in eight directions, and, at the right altitude, drop bombs on the targets below.

Fast-moving alien fighters of various shapes zip around the screen trying to zap you. While fighting them off, you must keep an eye on your fuel gauge, altitude display and bomb supply. You have a force shield which unfortunately uses up lots of energy, and only forty bombs in which to knock out as many of the exotic alien buildings as



possible. At the end of every stage there's a runway on which you can land to refuel and re-arm, though you must beware of ground attacks. There are various play options including skill level, gravity on/off, type of control and so on.

Not bad at all; a sort of cross between **Xevious**, **Zaxxon** and **Falcon Patrol**, with decent music and sound effects.

**Program:** Blue Max 2001, 64
**Supplier:** US Gold
**Price:** £9.95
**Graphics:** ★★★★★★
**Sonics:** ★★★★★★
**Gameplay:** ★★★★★★

# MINTER MANIA

*Jeff sounds off about the awesome Amiga, ponders on video violence and picks some of his favourite new games*

THIS YEAR'S PCW Show was a very significant one for me, for a variety of reasons. The main occurrence will be of interest to all Commodorians, and it all started on the very first morning, while I was still getting my systems upon my own stand. Guy Kewney came up and started chatting, then led me off down to a private booth just down the hall. It looked fairly boring from the outside, just a single sign 'Metacomo Demonstration Suite' on the door. I disappeared inside and emerged about an hour later with my mind completely, utterly and irrevocably BLOWN.

## Amigamania

What was behind that unassuming door was Commodore's new AMIGA computer. Despite all the rave reviews that the system's been getting, I had been reserving me judgement — 'I'll believe it when I see it' was my attitude . . . Well I saw it and WOW!! I believe it!

Having been programming the Atari ST for a while now, I'm used to 68000-based systems, and I figured the Atari to be pretty fast. AMIGA, however, makes the ST look like a Z81 in SLOW mode. AMIGA draws fully-filled polygons like most micros plot pixels. AMIGA runs lots of different programs at the same time. It can draw in 4096 colours. Even in hi-res, where most systems can only display monochrome, the AMIGA displays 16 colours at a resolution of 640x640.

The AMIGA's outstanding performance comes from the support that the 68000 receives from three custom chips (which were designed, incidentally, by the same guy who designed the ANTIC chip in the Atari 800). These chips handle stuff like the BIMER (or Bit Image Manipulator), the sprites, the sound and the DMA. The system has eight sprites (theoretically). The actual limit is dependant upon the vertical positioning of your sprite objects, but suffice to say that it's easy to get more than eight sprites if you want them. Chances are, thanks to BOB, you won't even need them . . . BOB? Ah, well y'see, there are these things called BOBs. Blitter Objects I think that means, and they behave like sprites, except that they're not, they're bitmapped objects controlled by the system. (Williams Defender machines use similar 'bitmap sprites' for the aliens etc). In case any of you sprite freaks figure that this method might be a little slow, consider this, in a demo called Robot City, several robots and a dog walk around the streets of a 32-colour robot city. You can pick up the picture with the mouse, and move it up and down the screen, and the animation doesn't stop . . .

AMIGA should be well-supplied with games, too. At the hush-hush Commodore official demo (given down the road from the show at the Royal Kensington Hotel), I flew a partially-completed Flight Simulator. There was none of the 'jerkiness' usually associated with small-computer simulators, everything was very smooth, the graphics were solid and the jet noise very realistic — perhaps because the noise was sampled for AMIGA by recording a REAL jet at an airport! The play was excellent — there was none of the usual 'lag' between control-motions and display-update which makes most simulators so difficult to fly.

As well as the Simulator, there are a number of titles already in development from Electronic Arts, including **Skyfox** and the **Pinball Construction Set**, and that brilliant arcade game **Marble Madness**. There is no reason why MM should not be every bit as good on the AMIGA as it is in the arcades. AMIGA is the sort of machine on which most arcade favourites could be programmed BETTER than the originals . . . Firebird are working on a 3D space shootie called **Starglider** which could well be a bit ELITE-y but with solid graphics. I shall be working with the machine too, I'm hoping to get one in the next three or four weeks. I'll keep you informed.

Zaarjaz the Amiga may be, but most people won't be able to afford it at first, coz it's mega-expensive. Hopefully the tech will get cheaper though. Usually does. Until then there's stil the trusty '64 and there's still plenty of good stuff about for the old workhorse . . . Commodore had some pretty nifty new sound hardware on show which certainly seemed to beef up the '64 capability . . . the latest Lucasfilm game called (I think) **Koriolis Rift** was to be seen running on an Atari and will doubtless make its way over to the '64 . . . quite a few '64 mice were in evidence . . . Supersoft had a rather spiffy sound sampling device which can be linked to MIDI, and which I invested in . . . oh yeah! Ariolasaoft had this MEGABIG video screen and I got to do **Batalyx** and **Colourspace** on it! Zowie! that was really fun . . . System 3 weren't displaying much of their much-hyped new kung fu game, but they WERE displaying scantily-clad females with whips and chains(!) until the act was banned. Most of the ground floor was taken up by Atari, Amstrad and Commodore. Commodore had plenty of 128's around running stuff like **'Exploding Fist'**.

I'm pretty busy now, even though I've finished Batalyx, I'm trying to get Colourspace up on the Atari ST and learning 68000 as I go along. 68000 is definitely the machine-language to learn if you're planning to go 16-bit. It's the code behind the Mac, the Atari ST and the Amiga, and it's really nice to use. A bit like having 6502 with **eight** accumulators and **eight** index registers **all** of which are 32-bits long! The basics of the code are pretty easy to pick up if you've already been doing 6502; I found that after a couple of days to orient myself I could hack along fine. Colourspace with a Mouse is great fun. I think games people will have a lot of fun designing games to use Mouse control. There's not the 8-way directional limitation of a joystick, and you can get really fine control. Flying that Simulator on the Amiga using the mouse was really ace once you got used to the difference. Playing Colourspace, it's possible to get a lot more expression into your display with the limitations of the joystick removed.

I shall be off on holiday this weekend, a nice chance to get my head together and start letting thoughts about my next '64 game come together. I find that I always design best when I'm on holiday. **Metagalactic Llamas** was designed in Portugal, **Revenge** in Crete, **Mama Llama** in Peru . . . must be the fact that I can disengage me brain from the actual coding and render it receptive to new ideas. Or maybe they get beamed into me brain by the sun, who knows???

Games to watch out for this month, or ones that have impressed me, are: **Mercenary** from Novagen . . . I saw the 3-D routines for this demo'd over a year ago on the Atari, and they were just waiting to devise a game to use 'em in. I've now seen the nearly-completed game, and it's pretty zarjaz, you can blow up bridges and see them crumple to the ground, you can fly over a large city in fast vector-3D and even go underground for a 100-room 3D adventure! I also liked **Who Dares Wins**, from Alligata . . . nothing complex, just a soldier battling his way thru enemy lines, but a satisfying shoot'em'up with a nice sprite handling (if you can cope with the gratuitous violence). Not that I don't like a spot of video mayhem, it's just that I have slight misgivings about it when it's directed against little human forms rather than the usual abstract and totally unreal aliens. Even so, I loved **Way of the Exploding Fist** . . .

## Frankie

Oh yea, what about all these movie tie-ins that everyone's into now? It seems to me that when people do the licensing bit, more thought is given to all the loot they're going to make from the licensing deal, than to the actual design of the game (which is often fairly mediocre). I still think that a game should sell on the strength of its design rather than because it has a famous name . . . What, for example, are they going to do in the Rambo game?? Will the objective be to butcher thousands of Commies or what? Any game based on Rambo has just got to be excessively violent . . . Still, some people CAN do it right, the **Frankie** game would have stood alone as a decent game in its own right with or without the Frankie endorsement.

I shall finish now coz I'm shortly to be off down the pub, heheh. Hopefully I should soon be able to tell you even more things about the Amiga once I get mine and start learning how to fly the thing. Until then I can but drool . . .■

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# WIZARDRY

*Accompanied by the strains of chilling music,* ***James Utarefson*** *ventures into the Castle of Illusions in The Edge's epic arcade adventure*

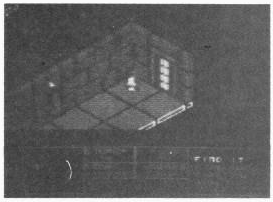
YOU ARE DRINN, no master sorcerer, but a humble apprentice. Yet the task facing you is of such awesome magnitude that even the most experienced wizard would quail at the very prospect . . .

The Castle of Illusions, setting for The Edge's epic game **Wizardry**, is indeed a challenging prospect. Packed with baffling puzzles, terrifying enemies and sinister traps, the Castle can only be penetrated with the help of a selection of spells and a strongly-wielded sword.

Based firmly in the world of **Dungeons and Dragons**, the role-playing fantasies in which magic and swordplay are your only weaons in a hostile world, Wizardry combines complex plotting with state-of-the-art graphics and music. Some comparisons are inevitable, particularly to Ultimate's **Staff of Karnath** and **Entombed**. but, if it's not heresy to say so, Steven Chapman's graphics for Wizardry look even better than the Ultimate team's.

The screen display is in three major parts. To the bottom right is a list of the spells and objects which you have at your disposal. You can scroll through these using the 1 and 2 keys.

In the centre are your status reports, Energy, Score, Hits and Wounds. The first two are self-explanatory. Energy goes up to 99, an d when it falls to 0, poof — you're dead. Your energy can be replenished by using a Heal spell, but of course these are limited in number. Hits and Wounds indicate your swordfighting prowess, by selecting



★ *At the first portal, you must gather your courage . . .*

Sword on the scrolling menu, pressing the fire button and waggling the joystick, you can do battle with the sundry creepy-crawlies inhabiting the Castle — but some of them will be too strong for your sword alone.

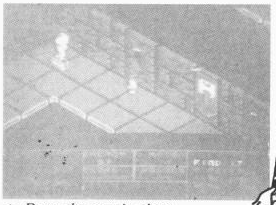
To the bottom left of the screen is a display which can give you magical clues when you use the Tall Tale spell, or show you sections of maps which will help you on your way.

Taking up the rest of the screen is the playing area, shown in scrolling perspective with intricately designed scenery and some terrifyingly imaginative sprites. The hero, Drinn, is a small figure in a helmet and jerkin, who moves in four directions along the corridors and through the many chambers of the Castle under the control of your joystick.

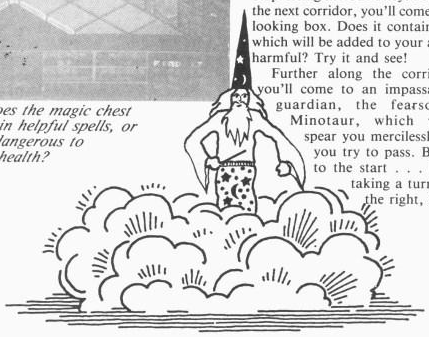
The Castle is divided into several areas, each one of which is protected by a number of different ghoulies and one particularly nasty Guardian.

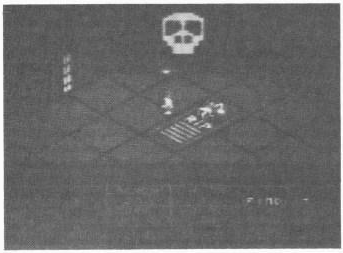
It isn't giving too much away to describe the solutions to the first area, since the handbook gives them all in a "Don't Read This!" section for the easily perplexed. As Drinn walks along the first corridor, he comes to a door which allows him through on pressing the CBM key. Proceeding along the next corridor, you'll come to a tempting-looking box. Does it contain useful spells, which will be added to your arsenal, or is it harmful? Try it and see!

Further along the corridor you'll come to an impassable guardian, the fearsome Minotaur, which will spear you mercilessly if you try to pass. Back to the start . . . Try taking a turn to the right, and you'll find yourself in a chamber with a vicious scorpion and a skull on the wall. Try a fireball spell to incinerate the scorpion, and Tell Tale to reveal the secret of the room. You'll see a speaking mouth appearing above you, and a message . . . "Knock it on the head". Before you can solve this puzzle you must leave the chamber and face a number of horrors. The Minotaur pops up again,



★ *Does the magic chest contain helpful spells, or is it dangerous to your health?*





★ *Fight off the spider in the skull room*

**GAME: Wizardry**
**MICRO: CBM 64**
**PRICE: £9.95**
**SUPPLIER: The Edge**

another spider bars your way, and a winged flying skull menaces you. Finally you'll find the hidden spell you're seeking — "Knock" — and you must return to the skull chamber to use it by lining yourself up with the skull on the wall, selecting Knock from your spell list and pressing the Fire button. When completed, your jerkin turns purple, a clue that you've achieved something significant!

Return to the furthest point you had reached, and you'll find a new door has opened, allowing you to penetrate further into the Castle. That's only an introduction to the complexities of Wizardry; Remember the Minotaur which you failed to pass? in order to defeat it, you need to find a magic door to another part of the castle, walk over a mystic sigil, and return the way you came. Right back at the doorway where you first entered the castle, a new entrance has opened.

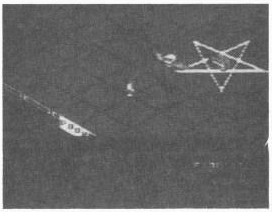
The chamber it leads to contains the fierce Minotaur (again — he certainly gets around!) and somewhere, the spell you need to defeat it. Use the Find It spell — needed in several situations where a seemingly empty chamber hides a vital clue — and you'll reveal the position of a magic chest. The spell you'll find here will enable you to defeat the Minotaur once and for all, and penetrate the next area, where you'll encounter a whole new range of enemies, including a menacing phantom and a deadly thundercloud.

All this frantic action is accompanied by a specially-written musical score which often gives you clues as to the dangers you face and the action you should take — for instance, one theme means that there's a scorpion about, and warns you to line up a firebolt or get ready for a bit of swordplay.

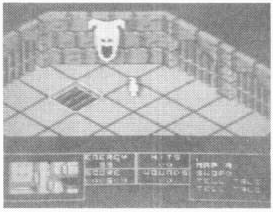
In search of the Prime Elemental, the ultimate object of your quest, you'll inevitably meet a sticky end many times. Wizardry is as complex a series of puzzles as anything yet available for the 64.

Fans of "aardvarks" — arcade adventure games — will be entranced by the game. Even players who aren't normally attracted to this sort of program will be impressed by the graphics — brilliant both in design and execution — and the music, which for once plays an important part in the game rather than just serving as an irritating backdrop.

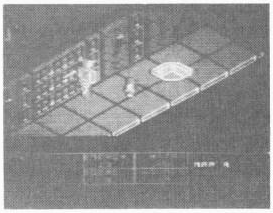
Moreover, Wizardry goes to prove that for all the flash of American imports, the Brits are still best when it comes to gameplay, matching the best graphics and music with imaginative plotting and fiendish complexity. ■



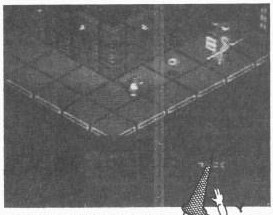
★ *To reach the chest you'll have to defeat the death's-head*



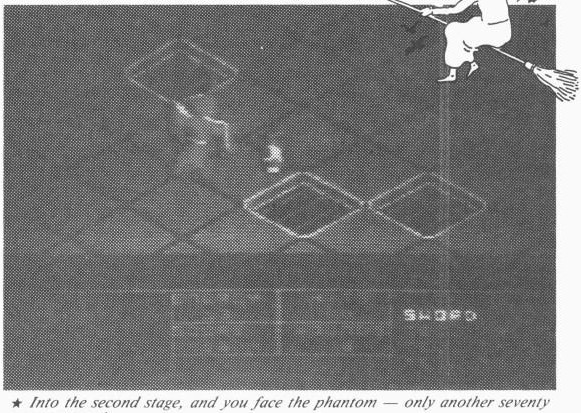
★ *Is the head on the wall your gateway to adventure?*



★ *Aim for the Sigil, with the Minotaur in hot pursuit*



★ *Killing the Minotaur is not the start of your problems!*



★ *Into the second stage, and you face the phantom — only another seventy screens to go!*

Since the dawn of the computer age the prices of home computers have been steadily falling.

But, remarkably, the price of a genuine, full-blooded disk drive has remained almost constant.

Constantly expensive.

You'll be lucky to pick up a decent one for less than £200 in the shops.

Now, however, you can have one delivered to your doorstep for only £119.95 (including VAT and postage and packing).

The new Triton Quick Disk from Radofin.

Its specifications are every bit the equal of a £200 disk drive, as a glance at our card above will confirm.

Quick Disk uses the very latest technology to store up to 100K on high quality Hitachi Maxell double-sided 2.8" disks.

Its disk operating system (DOS) uses standard commands so it is truly easy to use, as any computer novice will be glad to hear.

While the price will be compatible with most wallets, there is a Triton Quick Disk compatible with most computers – Commodore 64, Spectrum (16K, 48K and Spectrum plus), Aquarius, Dragon 64 and all MSX Systems.

And, naturally, included is an interface box plus all connecting cables and instructions.

In short, what we deliver is a complete, genuine disk drive. Not a tape or wafer in sight. All for only £119.95.

And when it comes to speed of loading, the Triton Quick Disk more than lives up to its name.

FROM 0 TO READY IN 7 SECONDS.

To put the Triton Quick Drive through its paces we used an ordinary computer game – Jet Set Willy.

From tape it took 170 seconds to load.

When loaded from the Triton Quick Disk it took a mere seven seconds. That is 163 seconds less than the tape and certainly as quick as most disk drives on the market.

# ORE USER YOU'LL E SPECIFICATIONS.

Proof indeed that the Triton has all the capabilities of its more expensive rivals.

AS TEST DRIVEN BY THE EXPERTS.

New it may be, but the Triton Quick Disk is already receiving rave reviews in the computer press. For example, in a recent Home Computing Weekly article it picked up their much coveted "Flipped" award.

As their journalist said ".... I am very impressed by the Quick Disk. Not only is it very quick, and both smaller and neater than other drives, but it's easier to use as well...the Quick Drive performed faultlessly.

It's easy to use and at around £120 is probably the best buy for the first time user."

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As yet you won't find the Triton Disk Drive in any shop. You can only lay your hands on one by filling in the coupon below.

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# And on the eighth day . . .

*Ken Matthews saves the universe before breakfast (again), and tries to avoid becoming a tasty snack for The Rats*

THIS MONTH I've no fewer than five new titles to look at, so without preamble — on with the job . . .

The first three titles aren't exactly new to the market, but it may well be the first you have heard of them, since Eighth day Software don't run to glossy ads but specialise in producing Quilled adventures in a range of difficulty levels at a mail order price of only £2.50 inc. VAT and postage!

Their beginners' game **Ice Station Zero** is centred around an international terrorist named Stirling who is holding New York to a billion dollar ransom. It appears that an all-out attack on the baddie's polar hideout is doomed to failure but a single person might succeed - it's down to you!

## Federation

The game itself is certainly of low difficulty but the underlying structure and logic is sound enough to get great enjoyment from completing the tasks despite one or two odd things you must do to a bird! There seems to be a good deal of to'ing and fro'ing to be done on the way to the station itself but this serves to give you the 'feel' of Eighth day's games ready for the more difficult games like **Quann Tulla** . . .

This time the job is a little more awesome — just save the Universe! It seems that the Federation, at war with the evil Empire is losing ground, or space and the need for a hero is great.

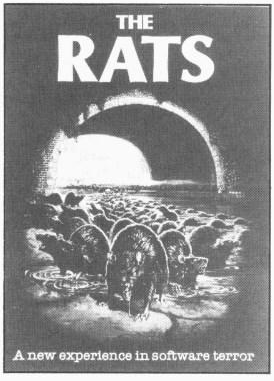
The game begins in the wreck of the flagship but there's certainly plenty to do in rescuing documents, destroying equipment and discovering a traitor before you can advance to the final problems on an alien planet.

The third game, **Aerie** is certainly advanced when compared with the previous two. I would describe it as magical fantasy where you will meet the typical ogres and cyclops. I found this adventure the most enjoyable of the three because of the use of characters to help and hinder and the necessity to think logically about how the odds and ends you discover are assembled into useful items. There are also a good number of magic words to be discovered and used to get maximum score but you'll need to find the right place and time.

On the basis of the three adventures I've seen I'd be happy to recommend the Eighth Day series as well programmed entertaining text games at a price that means they must be worth a try. You can obtain the games direct from Eighth Day Software, 18 Flaxhill, Moreton, Wirral, Merseyside, L46 7UH. Some of you will be pleased to know that they also provide hint-sheets in exchange for an SAE.

New from US Gold in their All-American Adventure series is **The Wizard and the Princess**. This is a rather old adventure previously available only as an import from the USA at a typically high price.

The object of the game is to rescue the fair Princess Priscilla from the evil wizard Harlin the Malevolent.




Playing the game came as a great disappointment. The full colour graphics were most unimaginative, and looked to be of a standard most ten year olds would disdain.

## Scoorpion

Pictures aside the game itself was very poor and slow responding. Only two word commands are accepted and the early part of the game is simply a matter of mapping the area around the start to find a rock without a scorpion behind it to kill a snake. Then you can rapidly advance to the only real problem of the game — crossing a chase to approach Harlin's lair and the final depressing confrontation.

It is very sad that after such a promising start with the excellent action adventure **Ultima III**, US Gold has completely failed to read the market, and now expect a game (which was good for its time but is now clearly showing its age), to sell to people who are used to getting high-quality adventures with original plots, from the likes of Infocom and Level 9, for around the same price.

So, if you were looking forward to **Wizard and Princess**, I'm afraid I'll have to suggest you keep your money in your pocket until something a little more worthwhile comes along from US Gold next month.

Finally this month I got a look at a pre-production copy of **The Rats** from Hodder and Stoughton.

The theme is obviously the book of the same name by master horror author James Herbert, in which mutant killer rats suddenly burst forth across London in search of their new favourite meal — human flesh!

Throughout the game you will find yourself in the place of various characters, both major and minor from the book. You will need to be quite quick thinking and acting to pick the correct moves from the list of options you are given.

## Rodents

The main game screen depicts a highly detailed, if rather small map of the affected part of London. Rat sightings from the public and security forces appear on the map and you have the option to read these reports and/or deploy forces to deal with the incidents. The final option on the main menu is the ability to research the origin of the rats and develop defensive and offensive weaponry.

Deploying the forces gives an icon driven menu which lets you choose which forces to use and what equipment to give them. Weapons research may yield very effective equipment but of course this takes time.

As an avid fan of Mr. Herbert, I found the game absorbing and fascinating from the brilliant loading sequence onwards, and I think that any adventurer looking for a new and original challenge will soon be caught up in the air of sinister menace the game builds.

The only negative point I found was an inability to restart the game after getting killed, short of reloading. I would hope that this will be sorted out in the final version, since I can't see many people waiting 10 minutes for a game to load in order to play for about five minutes before dying as seems almost inevitable until you've worked out the opening moves.

That's it for now but look out for next month's issue which will cover Activision's **Hacker** and Ariolasoft's **Adventure Construction Set.** ■

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| Clear | Lock X | Quadrilateral |
| Colour | Lock Y | Read |
| Copy | Merge | Unplot |
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| Fill | Output | Zoom |
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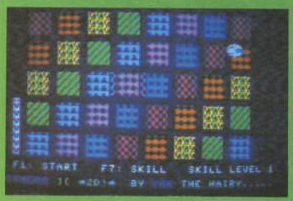
# The commodore HORIZONS show guide

**26th / 27th October 1985**
**Tech West, Shepherd's Bush**

*Your 16 page pull-out guide to the best computer show of the year*

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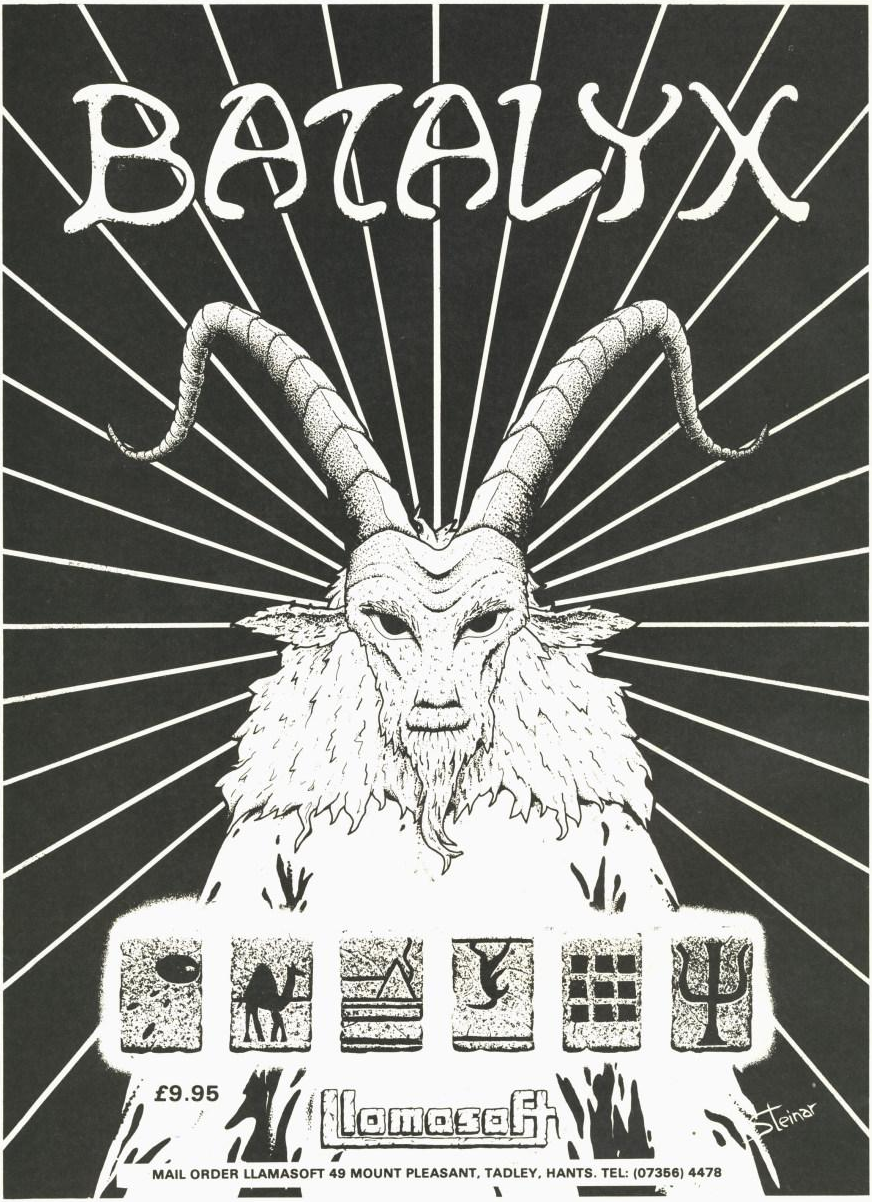
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# EXHIBITORS

## Anirog Software

**Stand 304/5**

**Unit 10,**
**Victoria Industrial Park,**
**Dartford, Kent,**
**0322 92513/8**

ANIROG SOFTWARE is one of the UK's best-known games houses. Latest titles include **JumpJet, Slapshot** and **Five-a-Side**, and new titles at the Show will include **Trivia**, a computer version of the popular quiz game "Trivial Pursuit". Anirog is also showing games for the C16, and a range of hardware including the Voice Master Speech Digitizer, a new Mouse, a disk cutter, dust covers, and the Super Sketch graphics tablet.

## Argus Press Group

**Stand 319/20/21**

**Liberty House,**
**222 Regent Street, London W1,**
**01-439 0666**

ARGUS PRESS is one of Europe's biggest publishers of computer magazines, one of which is the popular Your Commodore (recently merged with Your 64). The Software group publishing games under

the Lothlorien, Quicksilva and Mind Games labels, including **Rupert and the Toymaker's party, Nick Faldo's Open Golf** and **Schizofrenia**.

## Aztec Software

**Stand 304/5**

**Unit 10, Ravensthorpe Ind Est,**
**Ravensthorpe, Dewsbury,**
**WS13 8LN, 0942-492826**

AZTEC SOFTWARE is responsible for a wide range of utility programs for the 64. On display at the Show will be a mouse with graphics software, a German version of the Speak-easy package, an assembler, and an extended Basic/compiler package (marketed under license by Argus Software).

## CDS Group Ltd

**Stand 310/11/12**

**Silver House,**
**Silver Street, Doncaster,**
**South Yorks, 0302-21134**

CDS SOFTWARE specialises in sophisticated simulations, such as the popular **Colossus Chess 4.0** and **Steve Davis' Snooker**. Included in this program is a computer play option which, for the first time ever, allows you to pit your snooker skills against those of the world champion. The trick shot facility allows you to set up and practice any shot you require.

## CHS Software

**Stand 309**

**62 Stretton Road, Mitcham,**
**Surrey, 01-646 1601**

CHS SOFTWARE will be showing its wide range of discount games and utility packages for the Commodore machines, along with a selection of hardware products.

## Computer Bookshops Ltd

**Stand 108/9**

**30 Lincoln Road,**
**Olton, Birmingham,**
**021-707 7544**

COMPUTER Bookshops is one of the biggest specialist retailers of computer titles in the UK. The company will be displaying a wide range of titles from all the best publishers, including best-sellers, new titles, and bargains in the "unusual book corner".

## Duckworth Publishers

**Stand 401**

**The Old Piano Factory,**
**43 Gloucester Crescent,**
**London NW1, 01-485 3484**

DUCKWORTH publishes a complete range of books and software for a wide range of home computers. A large number are devoted to adventure games, including a number of titles by *Commodore Horizons* contributors Mike and Pete Gerrard. Other titles by Kevin Bergin include *Impossible Routines for the CBM 64*, and *The Complete 64 ROM Disassembly*. Visit the Duckworth stand to see these indispensable reference books and the latest titles.

## Evesham Micros

**Stand 335**

**Bridge Street, Evesham, Worcs,**
**0386 41989**

EVESHAM Micro Centre is a leading utility program specialist. **Quickdisc +**, the hardware disk fastloader, enables the 1541 to operate at four to five times its normal speed, with formatting in ten seconds and fast file backup. Totally software transparent, the Quickdisc + offers a host of facilities for only £19.95. Other Evesham products include **Freeze Frame, Disc Dissector, Doubler**, and the **1541 Physical Exam** diagnostic program. check out all these, and Evesham's selection of computer supplies, on stand 335.

## First Publishing/Software

**Stand 505/6**

*I'm blowed if I can see why this damn thing isn't working...*

# WELCOME TO THE commodore HORIZONS SHOW

Welcome to the first Commodore Horizons Show! Whatever your interests, we're sure there will be something here to entertain and educate you.

Perhaps some of you will have been to shows in the past, and found that you either have to search through the entire event to find any exhibitors showing Commodore product; or, that your particular field of interest isn't well enough represented. Well, that's part of the reason for this show; all the exhibitors here are associated with Commodore software or hardware, and the wide range of products means that there should be something for everyone. Games players, business users, hardware buyers, programmers and creative computerists will all be catered for — it's the kind of balance we like to keep in Commodore Horizons.

We hope you'll all enjoy yourselves, looking at the new products, stocking up on essentials such as floppy disks and cassettes, playing the games and planning your Christmas purchases (only two months to go, remember!)

You'll find lots of competitions, promotions and special show offers to tempt you, and if you drop in on the Sunshine stand you'll have your chance to chat to the people who produce Commodore Horizons, and to win a C128 by playing Jeff Minter's Syncro 2 game.

It's an exciting time for Commodore users, with the C128 and Amiga on the horizon, and the 64 still dominating the home micro market. We hope you'll join us at the Show, and stay with us as the world of Commodore computing becomes bigger and better!

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VIC 20

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- Harbour Attack (cass.) ☐
- Space Sweep (cass.) ☐

I would like to receive a regular issue of Soft Post. I own a Commodore (delete as applicable): VIC 20/64/16/Plus 4.

Title (tick): Mr. ☐ Mrs. ☐ Miss ☐ Initials

SO CHO1209

Surname

Address

Postcode

STD. Code Telephone

### OR, IF YOU INTRODUCE A FRIEND.

Fill in your name and address and your friend's below. Now you can choose one item from either list, just tick a box.

VIC 20

- Programmer's Reference Guide (book) ☐
- Introduction to BASIC II (cassette) ☐

COMMODORE 64

- Programmer's Reference Guide (book) ☐
- Fantasy Five (cassette) ☐

COMMODORE 16/Plus 4

- Jack Attack (cartridge) ☐

I would like to introduce my friend who owns a Commodore (delete as applicable): VIC 20/64/16/Plus 4.

Title (tick): Mr. ☐ Mrs. ☐ Miss ☐ Initials

Surname

Address

Postcode

STD. Code Telephone

ONLY ONE APPLICATION PER HOUSEHOLD.
PLEASE ALLOW 28 DAYS FOR DELIVERY.

commodore
HARD SOFT TO BEAT

Post to: SOFT POST, FREEPOST, Commodore Business Machines (U.K) Ltd., Corby, Northamptonshire NN17 1BR.

# FLOOR PLAN

Average pitch size:
2.5 × 1.5m
Table size:
1.8 × 0.6m

FIRE EXIT

406 407 408 405 404 403 402

CATERING

506 505

504 503 502

501

401

ENTRANCE

ORGANISER'S OFFICE

GENTS

FIRE EXIT

301 302 303 304 305

306 307 308

FIRE EXIT

321 320 319

329 322 323 328 324 327 326 325

337 330 331 336 332 335 334 333

309

310 311 312

267 206 205 204 203

210 209 208

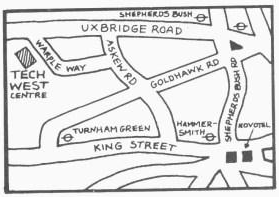
202 201

GENTS

318 317 316 315 314 313

## TECH WEST CENTRE

Warple Way
Shepherds Bush
London W12




FIRE EXIT

109 108

106 107 104 105

101

103 102

LADIES

ENTRANCE

**Unit 20B,**
**Horseshoe Park,**
**Horseshoe Road, Pangbourne,**
**Berks, RG8 7SW, 07357-5244**

FIRST publishes an internationally renowned series of books and software specifically for the Commodore 64. Titles include *The Anatomy of the CBM 64, The Anatomy of the 1541 Disk Drive,* and *The CBM 64 Ideas Book*; and software packages including an **Assembler Monitor**, the word processor **FirstWord**, the database **FirstBase**, and the latest, **Powerplan**.

First Publishing's books and software are published in association with the successful German group Data Becker.

## FlightLink Control Ltd

**Stand 315**

**Unit 12,**
**The Maltings, Turk St, Alton,**
**Hants, 0420-87241**

FLIGHTLINK specialise in joysticks for a wide variety of industrial and commercial applications, as well as the Hotshot range on display at the Show.

Twenty years' experience of switch and analogue joysticks for demanding applications goes into the low-cost reliable Hotshot range, available for all Commodore machines including the C16-Plus/4. Versions are also available for many other home computers.

All Flightlink joysticks are designed and built in the UK, and you can purchase any Flightlink product confident that the company will still be around to service them and supply new products in the years to come.

## GEM Distribution

**Stand 333**

**17 Staple Tye, Harlow, Essex,**
**0279 444615**

GEM distribution will be showing a range of discount games and utility software for the Commodore computers, including titles for the C128.

## Gultronics

**Stand 325/6/7 & 101**

**200/204 Tottenham**
**Court Road, London W1,**
**01-323 2838**

GULTRONICS distribute most makes of home computer, peripherals and software. The company specialises in Epsom printers, and also deals in a range of portable computers.

## H&P Computers

**Stand 314**

**UK Agents: 9 Hornbeam Walk,**
**Witham, Essex, CM8 2SZ,**
**0376-511471**

DUTCH-BASED H&P Computers will be showing The Final Cartridge for the 64. This utility cartridge adds 20K extra RAM for Basic programs, loads and saves disks six times faster,

provides Centronics printer interface software, screen dump for normal and hi-res program, an m/l monitor, a reset switch, new DOS commands, and a cassette turbo routine. Cost per unit is £50; talk to H&P about their special show offers.

## ICPUG

**Stand 204/5**

**57 Gunnersbury Avenue,**
**Ealing, W5 4LP, 01-993 2634.**

THE INDEPENDENT Commodore Products Users Group is a nationwide network of affiliated Commodore owners' clubs. For technical advice and details of ICPUG membership, drop by the stand. ICPUG will be organising seminars by well-known computer personalities throughout the day, covering subjects such as Basic, COMAL, and assembler; disk drives; networks including Computnet; databases; legal aspects of programming; and new Commodore hardware — plus any other subjects you wish to raise.

Answer Back man Jack Cohen, author Raeto West, and ICPUG Chairman Mike Todd are among those who will be appearing on the ICPUG stand.

## IDS Computer Supplies

**Stand 303**

**PO Box 436,**
**Milton Keynes, MK13 0QX,**
**0908-310896**

IDS COMPUTER Supplies are specialists in computer consumables. The company deals in a wide range of floppy disks, paper, printer ribbons, cleaning materials, and so on, and are main distributors for Control Data products.

## Intergalactic Robots

**Stand 502**

**Unit 208,**
**Highbury Workshop,**
**22 Highbury Grove,**
**London N5, 01-359 2536**

INTERGALACTIC Robots will be showing its wide range of robotics and interfacing devices for the CBM64 and other computers. The products are ideal for experienced experimenters or those wanting to learn more about robitics, and provide an inexpensive way to get into this fascinating field.

## Level Ltd

**Stand 313**

**c/o Biblios Distribution,**
**Star Road, Partridge Green,**
**Nr Horsham, West Sussex,**
**RH13 8LD**

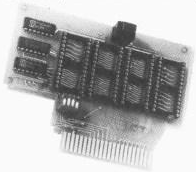
LEVEL LTD published a series of indispensible Commodore reference books by Raeto West. titles include *Programming the CBM 64; Programing the Vic;* and *Programming the PET*. Programs from the books are available on tape or disk, and the author, Raeto West, will be appearing at the ICPUG seminars to answer technical questions.

## Lightwave Leisure Ltd

**Stand 503**

**2 Maldwyn Rd, Liscard,**
**Wirral, Merseyside,**
**051-639 5050**

LIGHTWAVE LEISURE imports and distributes Commodore add-ons from Germany. Among the products handles by the company are **The Stick**, a revolutionary baseless joystick operated by mercury switches; an EPROM burner,



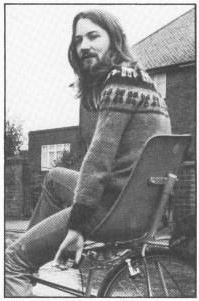
which allows you to load your own programs into a special chip and in effect create your own "cartridges"; a motherboard, which can hold a number of programmed EPROMS; and a Test Board, which exposes all the data, address and pilot wires from the cartridge port of the 64.

## Llamasoft

**Stand 102/3**

**49 Mount Pleasant, Tadley,**
**Hants, 07356-4478**

JEFF MINTER is probably the best-known games programmer in the business. His "hairy" games, including **Revenge of the Mutant Camels, Sheep in Space** and **Ancipital**, are fast and furious shoot-'em-ups, while **Psychedelia** is a "light synthesiser" for the 64, C16 and Atari machines. Along with these titles, you'll be able to see Jeff's latest, **Batalyx**, at the Show, and get down to some serious joystick-bashing. And



don't forget to read Jeff's monthly column in Commodore Horizons . . .

## Logic Sales Ltd

**Stand 336/7**

**19 The Broadway, The Bourne,**
**Southgate, London N14,**
**01-882 4942**

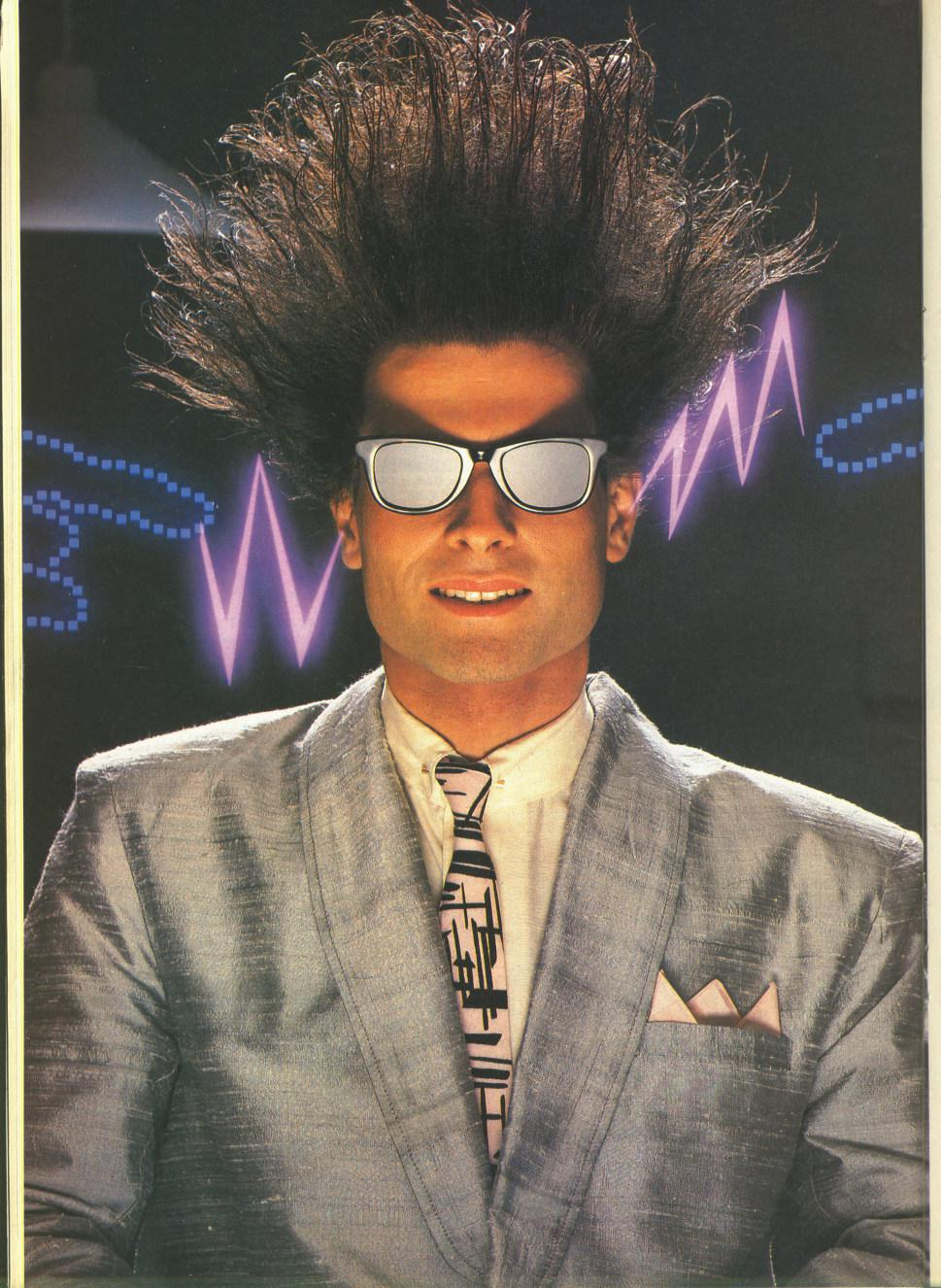
LOGIC SALES will be showing their wide range of games and utility software for the range of Commodore computers.

## Martech

**Stand 208**

**Software Communications Ltd,**
**Marsh House, 4 Bay Terrace,**
**Pevensey Bay, East Sussex,**
**0323 768456**

COME AND SEE Martech's three major games releases; **Geoff Capes Strongman Challenge**, a game in which strategy and skill takes the place of sheer brawn; **Zoids**, based on Tomy's highly successful series of monster machines, an epic of battle between the Red and Blue Zoids; and **The Planets**, a series



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It's a unique combination.

Your Special Identity Number and Personal Password. The valuable key to huge databases teeming with activity, set on our Mainframes across the nation.

On Micronet 800, you're a valued individual, adding your own special flavour and personality to the database.

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And there's FREE (& instant) National Electronic Mail, plus International Telex, and the Contact and SwapShop bulletin boards.

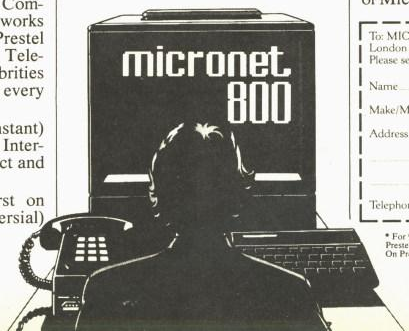
Get computer news first on Micronet's daily (and controversial) "Newsflashes" and read up on the latest reviews and courses. Feast from our regularly changing menu of programs to download straight into your micro - absolutely free.

You also get access to Educational Computing's "School Link" and Prestel's huge 300,000 page database, including world news, business & share bulletins and optional homebanking. For only £16.50 per quarter, that's less than the price of a daily paper!

Micronet is unique amongst networks and bulletin boards as it keeps your phone costs very low with special local* rate calls whenever you connect up – that's around 40p for a whole hours entertainment each evening.

The only accessory you need is a Modem, to get the best value for money around in micro communications.

Fill in the coupon for the full facts and send to Micronet 800, 8 Herbal Hill, London EC1R 5EJ. But be warned, Micronet 800 is a 'living' service with ever-expanding features. So maybe you'd be better to call in at your local Micronet 800 Action Station. There are thousands of Micronetters waiting to meet you!




To: MICRONET 800, Durrant House, 8 Herbal Hill, London EC1R 5EJ. Telephone 01-278 3143.
Please send me the full facts about Micronet 800.

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Make/Model of Micro .....

Address .....

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Telephone .....

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SEE US AT The Commodore Horizons show STANDS 330 & 331

# Precision Software's

# Business Software Family

## for your Commodore 128

## Superscript — The Intelligent Word Processor

*"If you need a sophisticated and powerful word processor ... this is the ultimate."*
**Trevor Doherty, Commodore Horizons July 1985**

### What is Superscript? –

Superscript combines word processor, spelling checker, calculator and mailmerge facility, all in one package. So Superscript gives you all the tools you need to produce high quality reports, tables, lists, personalized letters and even labels quickly and efficiently. Superscript is a remodeled and vastly enhanced version of the popular **Easy Script** and **Easy Spell** programs that have sold more than 350,000 copies worldwide, so you ***know*** you can rely on it.

### Simple for the beginner

If you are a newcomer to word processing, Superscript's simple command menus put you immediately at ease.
Each command is a single word, and for each command there's an extra line of helpful description. To select a command, you simply move the cursor. You don't even have to type the command!
Once you are more familiar with Superscript, you can bypass the menus.

### Powerful for the experienced user

Superscript also gives you the ability to *cut work down to a minimum* by storing your own command sequences or text on single keys. This means that with a single keystroke you can reproduce commonly used phrases or multi-line addresses from a glossary, load in document formats or execute a pre-programmed sequence of operations. *That's intelligence!*

### Editing options

Superscript gives you all the editing options of a business-style word processor, with full block manipulation for cut-and-paste; overtype or text insertion modes; search and replace with pattern matching and optional case discrimination; backward search; case shifts for single words or larger blocks of text. *And much more.*

### Good with numbers

Superscript allows you to extend your editing line up to 240 columns for wide documents like financial statements, and with decimal tabs it's easy to enter properly justified tables of numbers.
Superscript's complete set of calculator functions can be used interactively, or you can operate on numbers from the text of your document. Apart from the usual mathematical functions like add, subtract, multiply, divide, and percentages, you have the ability to add rows, columns or even whole tables.

### Good with spelling, too

The built-in spelling checker goes right through your text, checking the unique words against its dictionaries, and stopping at each one it does not recognize. You have the option to correct the error, learn the new word or ignore it. Superscript has its own 30,000 word dictionary. In addition, it stores new words as it learns them.

### Mailings with Superscript

Personalized mailings are easy with Superscript. You can enter the data manually or use data extracted from your spreadsheet or database. Merging can be selective with equal-to / not-equal-to logic. A mailing labels template is included to help you complete your mailing and you can alter the template to suit your own label format.

***Attention Easy Script users!***
*If you're an Easy Script user, then Superscript is the obvious choice. With its enhanced features and more powerful facilities, you'll be able to do so much more. There are no compatibility problems either. You can run your Easy Script data or Easy Spell dictionary disks under Superscript.*

## Superbase — The Programmable Database

**For sheer quality and professionalism, Superbase is in a class of its own.**

### Easy to get started –

The first thing you'll notice about Superbase is the superb 230 page owner's manual.
The tutorial section takes both first-time and experienced users right from first steps through accomplished programming, while the reference section is a model of completeness. You'll enjoy the manual's easy style, its plentiful illustrations and comprehensive index.

### Easy to use –

You'll soon be ready to set up your own filing system - business information, professional data, records of all kinds. You design your record layout right on the screen, exactly as you wish it to look, with helpful on-screen explanations never more than a step away.

With the layout in place, you can then use Superbase's built-in commands to enter, change or delete individual records. Once you have built up a file of records, you can select, sort and output data exactly as you need it. To begin with, you'll be accessing Superbase commands through menus. The menus lead you step-by-step to the required action. Nothing could be simpler!

### The hidden power –

As you become more familiar with Superbase, you'll want faster ways of accessing commands. One way is through the command line. Any sequence of menu options can also be typed directly onto the second line of the screen, known as the command line. *But this is just the beginning.*

The *real* power of Superbase is that you can string any number of these commands together to form complete programs. When writing programs, not only do you have access to the dozens of powerful Superbase commands; you can also use the complete set of ordinary BASIC language commands.

LOADS INTO MEMORY TOGETHER

***This capability turns a straightforward data management system into a true database of incredible power.***

Developing complex applications for yourself becomes a realistic proposition, with your hardware configuration as the only limiting factor.

### The integrated office –

*Superscript and Superbase will actually load into the computer's memory together.*

This means that you can switch between Superbase and Superscript at will passing information between the two and working on your filing system and documents without ever having to reload. *That's integration!*

Buy your copy today, and join the thousands of satisfied Superbase users worldwide. They've proved its power and flexibility, and realised its benefits:

- ★ Entire machine-language program is memory-resident: No need for swapping or reloading.
- ★ Built-in single drive back-up utility.
- ★ State-of-the-art indexing for fast retrieval: any record in less than 0.3 secs.
- ★ Fields may be added, and field specifications altered without the need to restructure the file.
- ★ Data types include calculated result for on-screen field recalculations, including full BASIC math functions.
- ★ Searches may be up to 127 fields deep, sorts up to 34 fields deep.
- ★ Report-writer generates fully formatted reports from responses to simple question-and-answer session.
- ★ Allows linking across separate files.
- ★ Includes free label printing program.
- ★ Supports all standard printer interfaces

**Also available on Commodore 64, Plus 4, Atari 800XL, Atari 130XE, Apple //c and Apple //e.**

## Super TYPE — The Professional Keyboard Trainer

Suitable for all ages, Supertype guides the novice typist towards complete typing proficiency, using proven keyboard training techniques. All the family can learn to touch-type at home, acquiring a valuable skill.

An endlessly patient tutor helps you to improve your productivity without expensive typing classes or travel.

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| | 128 | Plus 4 64 | 800XL | 130XE | INFO |
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| **Superbase** | 99.95 | 79.95 | — | — | ☐ |
| **Superscript** | 79.95 | 69.95 | 69.95 | 69.95 | ☐ |
| **Supertype (Disk)** | — | 25.95 | 25.95 | 25.95 | ☐ |
| **Supertype (Cass)** | — | 19.95 | 19.95 | 19.95 | ☐ |

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Telephone 01-330 7166 Telex 8955021 PRECIS G

Precision Software

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of programs explaining all about the Solar System, and presented by Heather Couper, President of the British Astronomical Association. Also look out for **Crazy Comets**, a fast-moving arcade extravaganza.

### Memoco Electron

**Stand 404**

**15 Windsor St,**
**Melton Mowbray, Leics,**
**0664 63544**

MEMOCO will be showing a robotic arm with six axes of movement and full position feedback, allowing closed loop control by the 64. Programmable from Basic, the Arm works with the 64, Vic 20, BBC, and shortly the IBM, Apple 2 and CBM PC machines. At £178, it represents an idea low-cost introduction to the field of robotics.

### Microdeal

**Stand 201/2**

**41 Truro Road, St Austell,**
**Cornwall, PL25 5JE, 0727-3456**

MICRODEAL is one of the biggest producers of C16 software, including a series of adventure and arcade titles. Also available is **Lands of Havoc** for the 64, a massive arcade adventure in which you control Sador, a reptilian warrior, in his journey around the mystical Lands of Havoc, in search of the power which will enable him to vanquish the evil Dark Lords. Lands of Havoc comes complete with a set of maps, and has over 2000 locations.

### Micromedia

**Stand 203**

**Rydal Mount, Baker Street,**
**Potter's Bar, Herts, EN6 2BP,**
**0707-52698**

MICRO MEDIA Computer Supplies cover a range of computer products including data recording devices, stationary, and backup equipment. Their clients, who demand the best in quality and service, include Avis Car Hire, the BBC, British Aerospace, Metal Box, Pye Telecommunications, Oxford University, and STC.

To find out more about the products and service Micro Media can offer, visit the company on stand 203.

### Micropride Ltd

**Stand 504**

**Unit 16,**
**Shipyard Industrial Estate,**

*Hey! I thought you could only do this with the disks!*

**Bridlingsea, Essex, 020630-4957**

MICROPRIDE manufacture and distribute a range of Commodore-compatible joysticks, data recorders and other products.

### Miniature Tool Company

**Stand 322/3/4**

**26 Queensbury Station Parade,**
**Edgware, Middlesex,**
**01-951 1183**

MTC ARE manufacturers of a wide range of connecting leads and cables for computers and peripherals. The company also markets Memorex data storage products, including the whole range of floppy disks, and a number of best-selling joysticks.

### Mushroom Software

**Stand 329**

**193 Romany Road,**
**London SE27 9PR, 01-670 3533**

MUSHROOM produce a range of powerful 64 utilities, including an Extended Basic package; Hyperdrive; Advanced Centronics Interface; and more. There's also a game, Super Scramble, and offers on Epson printers suitable for use with the Centronics utility package.

### Newsfield Ltd

**Stand 405**

**1-2 King Street, Ludlow,**
**Shropshire, SY8 1AQ,**
**0584-5851**

NEWSFIELD publishes three of the biggest games magazines on the market; Zzpp 64, Crash, for the Sinclair Spectrum, and Amtix for the Amstrad machines. Newsfield will have the latest issue of Zzap 64 hot off the presses, and you'll be able to catch up with all the latest in the goodies department, such as binders, T-shirts, sweatshirts, caps, and more.

You'll also have the opportunity to talk to some of the people involved in writing and producing the magazines.

### Precision Software

**Stand 330/1**

**6 Park Terrace,**
**Worcester Park, Surrey,**
**KT4 7JZ, 01-330 7166**

PRECISION markets some of the most successful and powerful business utility programs for the Commodore machines. The latest products are for the C128; **Superscript 128**, the professional word processing system, at £79.97; and **Superbase 128**, a programmable database at £99.95.

Superbase, with over 70,000 users, is set apart from other similar products by its programming interface. Using a range of fifty Basic commands, the program can be tailored to your exact needs, rather than the user having to adjust his records to fit the database.

Superscript includes a spelling checker with an unmatched vocabulary (which can be extended by the user), a mail merge facility, and calculator function, apart from being one of the most powerful and easy-to-use word processing programs on the market. The two programs can be loaded into the C128 at the same time, to provide a powerful integrated office system at an affordable price.

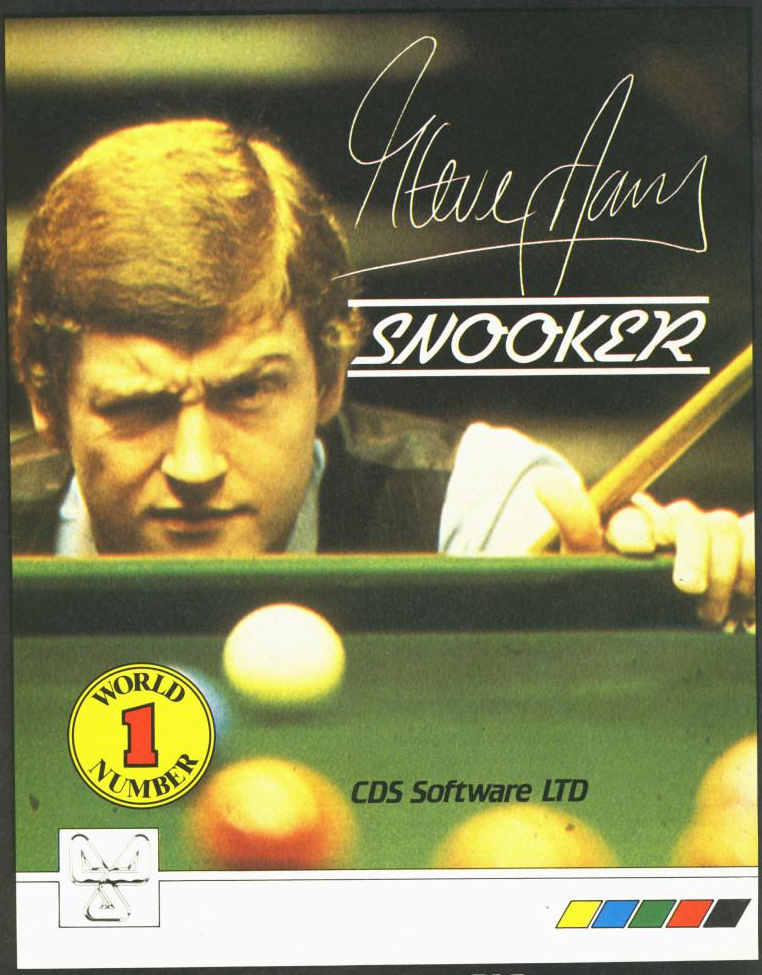
Precision also handles the ST10C, a 10Mb hard disk drive for the CBM 8000, 64 and 128, supporting both IEEE and serial interfaces.

### Robcom Ltd

**Stand 334**

**36 Market Place, London**
**NW11 6JP, 01-209 0118**

ROBCOM'S main product is the **Turbo** range of CBM64 extension cartridges. There are



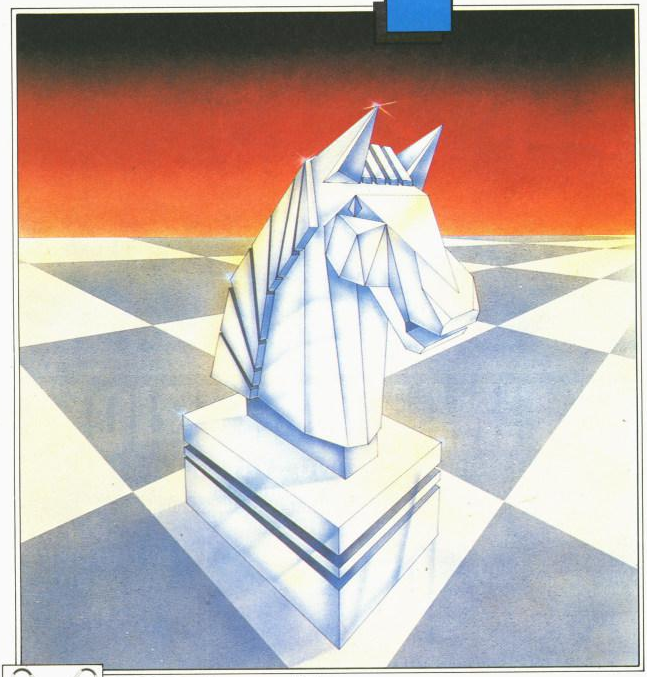

**Available for the C16 £7·95**
**C64/128 Cassette £8·95 Disk £12·95**

*From all good computer stores*

*OR DIRECT FROM* **CDS Software Ltd**

*CDS Software Ltd, Silver House, Silver Street, Doncaster DN1 1HL (0302) 21134 (5 Lines)*

# COLOSSUS 4 CHESS



CDS Software LTD

**Available for the Commodore 64/128**

Cassette £9.95 Disk £14.95

*From all good computer stores*

OR DIRECT FROM **CDS Software Ltd**

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# OR... MADE BY ALIEN

# THE FINAL CARTRIDGE®

## THE FIRST OUTSIDE OPERATING SYSTEM FOR THE CBM 64

**This new operating system built in a cartridge does not use any memory and is always there. Compatible with 98% of all programs.**

Features:

- **DISK TURBO** - 6 times faster disk access - loading and saving.
- **TAPE TURBO** - 10 times faster, even with files - normal Commodore commands - compatible with standard turbo's.
- **ADVANCED CENTRONICS INTERFACE** - compatible with all the well-known centronics printers and Commodore printer programs. Prints all the Commodore graphics and control codes (important for listings).

  Advanced screen-dump facilities. Prints Low-Res, Hi-res and Multicolour. Full page!!! Even from games and paint-programs, like Doodle, Koala Pad etc. Searches automatically for the memory-address of the picture.
- **24K EXTRA RAM FOR BASIC-PROGRAMS AVAILABLE:** Two new commands „Memory read", „Memory write". They move 192 bytes with machinelanguage-speed anywhere in the 64K Ram of the CBM 64. Can be used with strings and variables.
- **BASIC 4.0 COMMANDS** - like Dload, Dsave, Dappend, Catalog, etc.
- **BASIC TOOLKIT** - with Auto, Renum (incl. Goto and Gosub), Find, Help, Old, etc.
- **PREPROGRAMMED FUNCTION KEYS:** - Run, Load, Save, Catalog, Disk commands, List (removes all list-protections).
- **KEYBORD EXTRA'S** - Allows you to delete part of a line; stop and continues listings; move cursor to lower-lefthand corner. Pokes and Syscalls in Hex. Typ-command operates your printer as a typewriter.
- **COMFORTABLE EXTENDED ML. MONITOR:** - with relocated load scrolling up and down. Bankswitching, etc.
- **RESET SWITCH:** - resets to monitor; resets with old, resets to Hi-Res printing; resets every protected program.
- **ON/OFF SWITCH** - we hope you never need that one.

12 Months replacement guarantee.

14 Days money back guarantee if you are dissatisfied.

**SPECIAL INTRODUCTORY PRICE**

FOR ONE **£ 50,-**

FOR TWO **£ 37,-** each

FOR THREE OR MORE **£30,-** each

**Don't wait for your friends ORDER ONE NOW!!! Just pay the difference if you reorder within a month.**

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**H & P Computers, 9 Hornbeamwalk Witham Essex CM8 2 SZ England.**
**Telephone: 0376 - 511471.**

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five cartridges in the price range £24.95 to £39.95, and facilities available include fast disk loading, fast cassette loading, centronics interface, monitor, programming utilities, reset switch, and much more. The latest Robcom product is a cassette alignment kit, which operates on all popular home computers and sells at a price lower than that of any other comparable product.

■

### RSC Ltd

**Stand 332**

RSC DISTRIBUTES Commodore-compatible data storage media and add-ons, including a selection of blank cassettes and games joysticks. Contact Mr Chopra on the stand.

■

### Screens Micro Distribution

**Stand 206**

THE COMPANY distributes a wide range of Commodore-compatible software and hardware.

■

### Software Int'l Distribution

**Stand 402/3**

**Units 10-11,**
**Imperial Studios,**
**London NW6, 01-731 4607**

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**Meedmore Distribution,**
**28 Farriers Way Industrial Estate, Netherton, Merseyside, L30 4XL, 051-521 2202**

STACK'S well-known range of home micro add-ons are now being handled by Meedmore Distribution, under the name Stack 100 Products. The range includes many products for the Vic 20 and CBM64, including dust covers, motherboards, joysticks and so on. The latest product is a trackerball, complete with graphic design software offering a full range of commands, at only £39.95.

### Sunshine Publications

**Stand 104-7**

**12/13 Little Newport Street, London WC2H 7PP, 01-437 4343.**

SUNSHINE publishes a range of computer books and magazines, including *Commodore Horizons, Popular Computing Weekly,* and a range of programming books for the 64. COME ALONG to the stand and you can play Jeff Minter's **Syncro 2** game (and win a C128, or one of a range of prizes from Sunshine and Commodore); pick up a copy of *Horizons* and *PCW*; meet the people who put the magazines together; pick up a T-shirt or a badge; and look at the wide range of 64 programming books.

■

### Syndromic Music

**Stand 301/2**

**35A Grove Avenue, London N10 2AS, 01-883 1335**

SYNDROMIC Music's Vince Hill will be showing the **Syntron Digidrum**, which features "live" digital percussive samples, turning your 64 into a high quality drum machine with features over and above dedicated products costing many times the price. All the new sound sets will be there too.

Syndronic Music will also have first stocks of the Commodore Sound Sampler, which allows you to record your own samples and recreate and edit them on your 64.

SIEL CMK 49 owners will be able to see the Sound Buggy, which turns the CMK49 into a programmable keyboard controller. Also on display will be the Commodore Sound Expander and four octave keyboard, lots of music software, and

details of show offers and packages. Come to the stand and give music to your Commodore!

■

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**Stand 209/10**

DISTRIBUTORS of Commodore-compatible software products.

■

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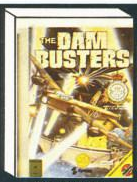

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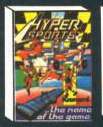

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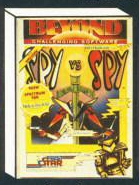

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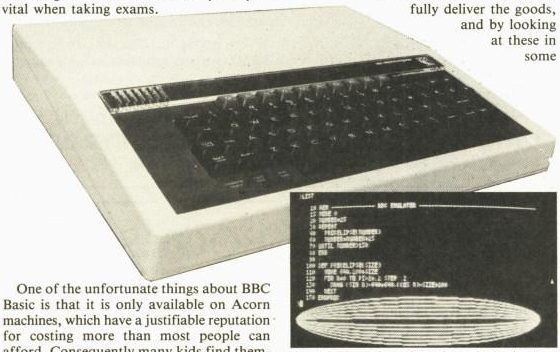
# BBC full of Commies?

*More like the other way around.* ***John Cochrane*** *looks at the software package which allows you to run BBC Basic on your 64*

THE ACORN BBC is perhaps the most important educational computer around. This is not to say that BBC computer is particularly good for educational purposes, just that the BBC is the computer most widely used in schools and colleges for teaching the fundamentals of computer science. Thus BBC Basic is the language most often used in class (officially at least) and, despite attempts to include the other machines commonly used by schools, a knowledge of BBC Basic is seen by many as vital when taking exams.



One of the unfortunate things about BBC Basic is that it is only available on Acorn machines, which have a justifiable reputation for costing more than most people can afford. Consequently many kids find themselves trying to learn a computer language at school which is not the same as the one provided by the machine which they use at home. It is very easy to become confused when trying to come to grips with computers and trying to learn two versions of Basic is an educational hurdle which can scare off even the most willing kids.

## Emulator

Many Commodore owners, not just the kids, will be familiar with the Catch-22 situation of having a computer at home and access to a different computer at school or work. A program is needed for the BBC but you can't get to the thing because of all the other users. You can use your Commodore to test out a few ideas but that's about it, you certainly can't create a full program and test it until now, that is.

Aztec Software has taken advantage of the generous RAM capacity and built-in versatility of the Commodore to produce a copy of BBC Basic running on the 64. There are some commands and facilities which could not be transferred to the 64, because of differences in hardware between the 64 and the Acorn machine; but the bulk of BBC Basic is now available to Commodore 64 owners at a very reasonable cost. The BBC Basic Emulator (sold under the name Shado) also provides a big improvement over Commodore Basic for day-to-day programming, because BBC Basic is a more sophisticated language than Commodore Basic, and the BBC Emulator gives direct and easy access to high-resolution graphics and sound.

There are three or four areas where the BBC Basic Emulator cannot fully deliver the goods, and by looking at these in some detail I can perhaps best show the limitations of the package. Bear in mind though that it's the things the Emulator *can* do which are probably more important than the things it can't.

Firstly, the Commodore screen display works in a different way to the Acorn BBC display, and thus the numerous video modes provided in BBC Basic are not fully supported. In fact the Emulator only provides two modes, a text-only mode similar to BBC Mode 6, but with 8 colours rather than just 2, and a high-resolution mode which is a sort of combination of BBC Modes 1 and 3. In high-resolution mode the Commodore gives 8 colours (colours in low-resolution only), text in 25 lines of 80 characters, and a screen resolution of 320 by 200. There seems to be a bug in the Emulator GCOL command, (which is supposed to control the colour used in graphics commands,) and this makes it difficult to produce fancy graphics in colour, especially when the Commodore will only produce low-resolution colours in any case. The advice is to stick to two-colour graphics. Hopefully the GCOL problem is restricted to the review version of the software.

The second area of difference between the Commodore 64 with BBC Basic Emulator and the Acorn version is the way that the disc drive works. Aztec has not been able to duplicate the random-access filing provided by the Acorn BBC, and hence several of the disc commands do not work. In principle the Commodore cassette and disc storage devices are used in the same way as the Acorn equivalents but here again Aztec have been unable to produce full compatibility with the Acorn devices. You cannot transfer data or programs between the Acorn BBC and the Commodore with BBC Emulator. This is a pity, particularly as the Whitby Spectrum Emulator — reviewed in May — does permit the Sinclair Spectrum and Commodore 64 to swap Basic programs by tape.

A further area of unresolved difference between a Commodore 64 and an Acorn BBC is the handling of machine-code facilities. Again a compromise has been made between getting the Emulator working with a reasonable free space for programs left in memory (18429 bytes) and full emulation. Thus the built-in Acorn assembler has been left out and the associated commands, such as USR and CALL, are non-functional.

## Education

All these areas where the Commodore BBC Basic Emulator differs from the official BBC Basic are pointed out in the small manual which accompanies the Emulator. The manual is brief and should be read alongside the Acorn BBC manual to reall get the most from the package.

There are certainly differences between a Commodore 64 emulating a BBC and the real thing. Some of those differences could be important in certain situations, and Aztec has left a few bugs in the software just to keep us on our toes. All in all though I think the Shado BBC Emulator achieves what it sets out to do, that is, to allow the Commodore 64 to be used in a serious way in support of educational computing. It is possible to use the Emulator at home to practice programming skills and develop programs. It would also be possible for those schools with both BBC and Commodore computers to make better use of their hardware.■

**SOFTWARE:** Shado BBC Basic Emulator
**MICRO:** Commodore 64
**PRICE:** £14.95
**PRODUCED BY:** Aztec Software Ltd
**SUPPLIER:** Micro Dealer (UK) Ltd. 29 Burrowfield, Welwyn Garden City, Herts AL7 4SS. Tel. 07073 28181

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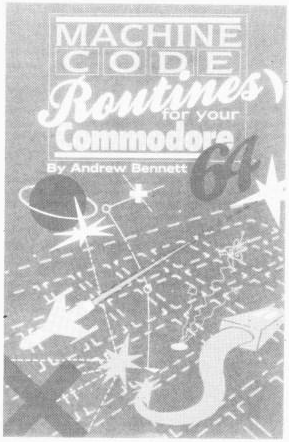


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# The bit-map mouse

*Can the Datex Mouse give your 64 the graphic abilities of a Macintosh?*
***Bill Donald** explores the pros and cons of bit-map mode*

THE DATEX MOUSE system consists of a mouse which plugs into number 2 joystick part of the C64, a system disk, a system cassette and finally a user manual. The manual consists of an explanation of the system software and maintenance of the mouse as well as a troubleshooting chart.

For those of you who are unfamiliar with a mouse, the device is essentially an upside-down tracker-ball. By moving the mouse over a non-slip surface, coupled with the driver software loaded into the machine, the screen curser moves in accord with the mouse. Rather difficult to describe the actions in words: you either love them or hate them, but the mouse is here to stay. Most of the IBM clone machines support them, and the Macintosh would be lost without its mouse. The mouse also forms a very important part of running the AMIGA.

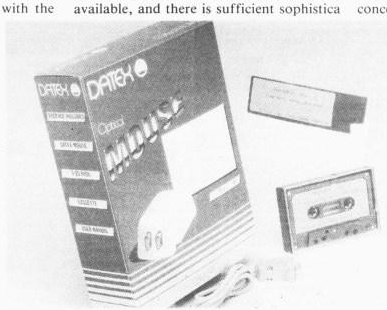
I must admit that I am not a 'mouse-man' using the C64. The likely reasons being two-fold; the obvious one being an acute lack of space around my own system, the second being born and bred on the cursor keys of the machine. The first reason is of my own making and in a workspace of 6 foot by 2 foot I have just room to squeeze the monitor, 2 drives, a Plus/4, RX80F/T printer, the C64 as well as the usual mountain of impediments we all collect as time goes by. The cursor key problem is personal and does have some validity; the C128 has additional cursor keys at the top of keyboard as well as those at conventional lower right-hand corner, and try as I may I cannot get into the habit of using the upper set. I am sure I am not alone in this!

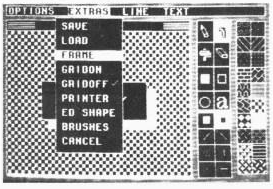
## Mac-like

The software driver supplied with the Datex Mouse is a graphics creativity package. It claims to support the C128, which it does, but only in C64 emulation mode. Ever since the announcement of the C128 a large amount of software has become available overnight which purports to run on the C128. True, it does, but not in the true sense of the words 'runs on', check with the retailer whether the software you are buying will run the C128 in it's native mode and not as a C64.

EEC Distribution, the designers of the Datex Mouse, are already working on the C128 software, taking advantage of the machine's superior abilities. Also in the pipeline is an additional graphics program giving many Mac-like features including Zoom, Expand, and a range of printer options, and a utility allowing the MS-1 to be used with Precision's Superscript word processor.

I found the basic software package to be comprehensive in it's coverage of commands. A very wide range of brushes are available, and there is sufficient sophistica




tion to provide for the use of user-defined spray or brush patterns. The circles are truly concentric (not like those on my Koala Pad) and the range of editing facilities I found to be very good. Text is supported on the screen with a limited range of fonts available, a novel one being italics. The output of frames is well covered with disk, cassette and printer being supported. Alas, only the dreadful Commodore printers come into this category, and it would have been nice if a Centronics driver had been installed.

There are two problems with the Datex Mouse software; the first dampened down my enthusiasm rather quickly once I discovered it. Because the software operates in 64 bit-map mode, which is necessary to provide the highest possible resolution plus print-out capability, colour is not fully supported! Only *2 colours* are allowed at once on the screen. This seems to be such a fundamental drawback in a product which is marketed as a graphics device for use on a machine that can display *16 colours*. All the other graphics tools in this price range support the full colour set, though admittedly they do not operate in bit-map mode.

The second problem with the Datex Mouse concerns the movement speed of the arrow which serves as the cursor. There are two user definable shift speeds, and although I did not try the slow speed, the fast speed was just not fast enough. The speed does not appear to be a logarithmic function of the distance moved by the mouse, but remains linear. In other words, you cannot reach opposite screen corners in one fast sweep of the mouse, that is unless you have eight foot arms.

I would tend to give the DATEX MOUSE the benefit of the doubt on this point and lay the fault at the door of the machine's hardware, but the failure to support all colours is a drawback.

## Utilities

My overall impression the Datex Mouse was very good, and I would buy one but for the criticism of the current software. The suppliers do make mention in the manual of further utilities and word processing software to come, so all may not be lost. Koala have gone a small way to opening up their graphics tablet with outrageously expensive programmers utilities on several disks.

I feel that the Mouse could overtake graphics tablets if the available software could match the inherent abilities of the C64. Given the better and faster graphics abilities of the C16 and PLUS/4, it could also stimulate more sales if these machines were supported.■

**Product:** Datex MS-1 Graphic Mouse
**Micro:** CBM-64, SX-64, C128 (64 mode so far)
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**Supplier:** EEC Distribution Services, 14 Western Parade, Great North Road, Barnet, Herts EN15 1AD. 01-441 1722.

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# Boom-chak-a-boom!

*Hip, hop, be-bop, don't stop — digital percussion sounds come to the 64 in the shape of the Syntron Digidrum.* ***Tony Mills*** *stops his robotic dancing long enough to check it out*

Practically every Top Ten single in the charts, from **19** to **You'll Never Walk Alone**, uses synthesisers rather than relying solely on conventional instruments. What many record-buyers won't realise is that the drum and percussion sounds are often electronic too — the LinnDrum, DrumTraks and Drumulator, for instance, are examples of digital sampling and microprocessor control applied to percussion sounds.

Now you can get the same realistic effects with your Commodore 64, using the Syntron Digidrum. Like the professional instruments, the Digidrum uses digital "samples" of real drum sounds, producing effects much more realistic than the old-fashioned home organ drumboxes — so real in fact that it can be impossible to tell whether a drum pattern is "real" or "sampled".

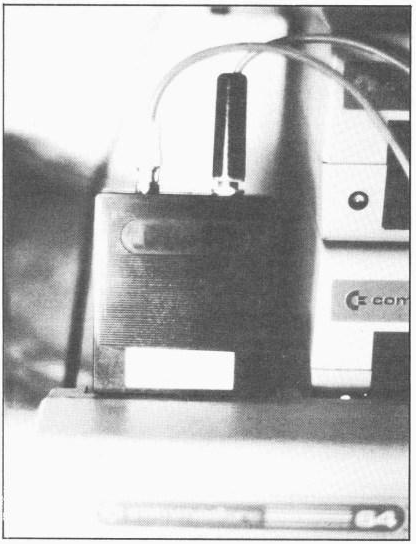
The digidrum consists of a cartridge-shaped box fitting into the user port of the 64, with software on tape or disk. The existing seven sounds are of excellent quality, and because they're defined by a software-controlled digital-to-analogue process, there's no reason why the Digidrum can't be used with a large interchangeable library of sounds — and in fact once it's in the shops, it will come with a wider

```
*** MENU ***

P = PROGRAMME RYTHM-LINE
R = RYTHM-TRACK COMPOSITION
T = SET TEMPO (1 - 64)
L = LOAD RYTHMS + RYTHM-TRACK
S = SAVE RYTHMS + RYTHM-TRACK
```

selection.

The main menu presents you with five options; Program Rhythm Line, Rhythm Track Composition, Set Tempo, Load Rhythms and Rhythm Track, or Save Rhythms and Rhythm Track. The first, selected with the P key, calls up a display showing a pattern up to 38 beats long. Also displayed are rhythm number, tempo, and the names of the seven instrument sound available, (C)rash cymbal, (O)pen hihat, (H) closed hihat, (D)rum, or small tom, (S)nare, and (G)rand tom. The cursor keys are used to move the pointer to the beat required, and sounds are inserted by tapping the appropriate keys. Unfortunately you can't hear the sounds playing as you write tracks.



You can compose ten rhythms in this way, defining the number of beats per bar separately for each one. Then you move to the Track Composition page, consisting of five columns into which you enter the pattern repeats you want, for instance, 2×1, 1×2, 4×4, and so on. Capacity is around 115 patterns each of 32 beats.

You can define a new tempo at any time, and save and load rhythms, or a song, to or from disk. There's an excellent demo track included on the disk. The sounds of the Digi-

drum are excellent, too, though the cymbals are inevitably a little short, since sampling time is at a premium. The basic sounds are bright and modern, and the £16 sound set disk contains excellent new Latin, Glass, Syndrum, Clap and other sounds and sound groups, which can be combined as you wish.

There's a major disadvantage for anyone wanting to use the Digidrum with other electronic instruments — in addition to the jack audio output (which must be connected to a suitable amp and speaker system) the only other output is a phono socket, which outputs one pulse per beat. You could use it to sync to analogue sequencers, some synth arpeggiators or another drum machine, but you'd need to invest in some expensive interfaces in order to get it to work with MIDI or the Roland DIN sync standard.

Overall, though, the Digidrum is a fascinating instrument which should find its place in the home studios of many musicians. In conjunction with a cassette-based multitrack portastudio and a couple of effects, or even just using the trusty track-bouncing method with two cassette decks, DigiDrum can give your music recordings a professional touch which belies its bargain price. ■

**Hardware:** Syntron Digidrum
**Micro:** CBM 64
**Price:** £65
**Supplier:** Syndromics, 35A Grove Avenue, Muswell Hill, London N10.

# THE SOUND OF THE CROWD

*. . . is most likely made on a 64!* ***Chris Jenkins*** *and* ***Harald Zeitgeist*** *present our latest roundup of music software for the tuneful micro*

YOU CAN'T avoid the sounds of Commodore 64 music — wherever you look, there's another new music product. Whether it's making music on the SID chip, controlling MIDI synthesisers, or sampling real sounds, the 64 is the world's most popular music computer — until the Amiga comes along!

Here are just a few of the latest CBM 64 music products.

## RHYTHM AND PITCH

Chalksoft's educational programs are among the best known in the CBM 64 market. The latest, Rhythm and Pitch, is a companion to **Note Invaders** , the music reading game.

Rhythm and Pitch is suitable for single students, or groups led by a teacher. There are two sets of tests, which can be taken separately or together. Using standard musical notation, the program will play a tune, then invite you to choose the correct note lengths, which are displayed beneath the stave. When you have done this, you must write down the correct pitches on manuscript paper. The program will then show you the correct pitches and timing, and award you marks.

Pitch tests are selected from the major scale; there are seven levels available from single notes to sequences of five notes. A card keystrip helps students to remember the correct keyboard controls.

Rhythm tests range from a single bar to four bars duration, and again the keystrip shows which controls to use. Various other options such as screen colours, volume, music speed, and score save (disk version only) are included.

Rhythm and Pitch is a well-designed educational program, though it should have been possible to practice the Pitch exercises without having to use manuscript paper — the **Music Construction Set** shows how this could be done. Still, a worthwhile package

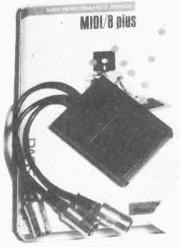
which will aid many CSE/O level students.

● **Chalksoft, 37 Willowslea Road, Worcester WR3 7QP, 0905-55192.**

## MIDI SOFTWARE

**Rittor Music** is responsible for distributing some of the most powerful MIDI software for the Commodore 64 — the Passport series.

The latest additions to this American range are **The MIDI Player** and **MIDI 8+** . Using the Passport **MIDI Interface**, the CBM 64 can control any MIDI equipped synthesiser or drum machine with this software. MIDI 8+ is a disk-based, real-time, 8-track, 6000-note recording program. Using MIDI 8+, you can select a MIDI channel, sound preset, and tempo, then record any music played in real time on a MIDI synthesiser. Then, in sync with a MIDI or Roland drum machine, you can replay the sequence at any speed or transposition, and "overdub" new sequences either played on the same MIDI channel, or on a different channel, controlling a different synthesiser. The potential of the package with a number of MIDI synths is astonishing; facilities such as chaining, linking, editing and lopping of sequences enable you to build up very complex compositions. MIDI 8+ also features autocorrection, so a sloppy performance can be pulled into shape; recording of performance information such as pitchbends, preset changes, and touch response; and realtime tempo control.



At £104.34 excluding VAT, MIDI 8+ is hardly an impulse purchase, but for the serious electronic musician it may well be a viable alternative to dedicated MIDI sequencer such as Roland's MSQ-700 or the PolyMIDI-1.

At £56.51 excluding VAT, Passport's **MIDI Player** package is cheaper, but doesn't give such satisfying results. This package doesn't control MIDI synths;it's graphics generator, which takes music files created using MIDI 8+ or the earlier MIDI/4+, and uses them to create dynamic patterns. The speed, density, shape and colours of the patterns can be chosen from an options screen, and "albums" of music files accompanied by graphics commands can be put together and saved to disk. As the music files control your MIDI synths, the graphics patterns appear simultaneously on the monitor. Unfortunately, none of the graphics options give staggering results — certainly nothing as good as Llamasoft's **Psychedelia** or **Colourspace** — so MIDI Player is probably only suitable for musicians with more money than sense (or Californians).

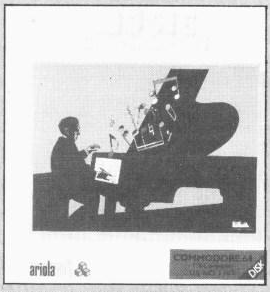
Rittor promises more Passport products soon, including a music transcription package which will produce high-quality printouts using the MPS-801, and Midi MIDI music library album.

● **Rittor Music, 24 Broomsgrove Gardens, Edgware, Middlesex, 01-952 5302.**

The Music Shop is the next Passport product from Rittor. It's a music transcription program for the 64 which handles ties, repeats, triplets, and different time signatures, then prints out perfect scores.

## MUSIC CONSTRUCTION SET

This disk or cassette-based program is ideal for non-musicians and experienced players alike. It's an icon-driven, joystick controlled composition package using a selection of

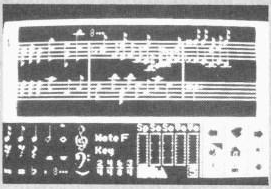



thirteen orchestral sounds from the SID chip.

The control screen shows a music stave with treble and bass clefs, and below it a control panel with note lengths, sounds and volumes for each voice, and options to load, save, and edit your compositions.

To give you some idea what the program can do, there are several demo tunes included with the package. Composition is easy; simply "point" at the note you want to play with the finger icon, then pull the note onto the stave and press the fire button. You can "cut and paste" by selecting the scissors icon, then move measures around as you wish. It's also possible to set the time signature of a piece, alter the tempo, transpose into a new key, and print out using a 1525 or other suitable graphic printer.

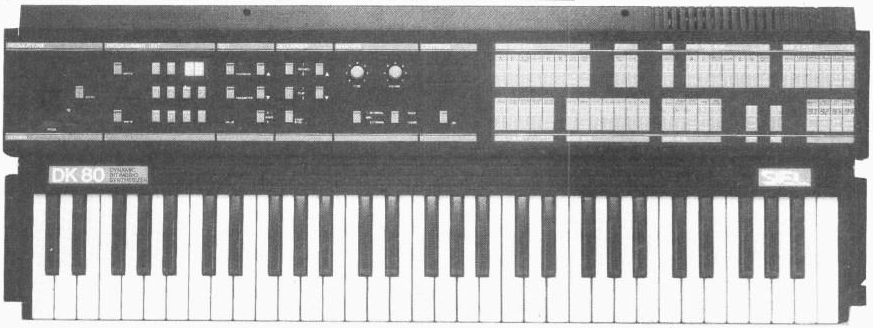
Like Activision's **Music Studio**, the Music Construction Set can produce very sophisticated results. It isn't as easy to get into, and




doesn't offer any sound synthesis capabilities, so it's perhaps best suited to experienced musicians rather than biginners.

● **Ariolasoft, Asphalte House, Palace Street, London SW1, 01-222 0833.**

Cheapest and easiest music package on the market is Make Music With Mistertronic, at £1.99. It gives you several instrument sounds to choose from, and using the joystick you can arrange notes to form a monophonic tune seven bars long, replay it, store it, and print it out. For the money, it's fabulous!




# SIEL soft

SIEL is one of the best Commodore 64 supporters in the music industry and divides its software and hardware releases more or less equally between those intended for its own range of keyboard instruments and those with wider applications. The latest releases include one package in each of these categories.

The first is labelled "Data Base Synthesizer", which is (more properly) a Synthesizer Data Base. The package stores and recalls sounds for almost any synthesizer (except Yamaha's DX series) fitted with the now almost-universal MIDI interface.

Despite the fact that MIDI is intended as a universal standard it's quite a feat to create a package which can cope with all the wide variety of MIDI synthesizers on the market and run on almost any MIDI interface (SIEL's is £39). The Data Base arranges up to 258 sounds in "families" of 32, to which you can append any title of your own choosing up to twelve letters long (such as Strings, Brass or Effects), and allows you to transfer sounds to or from your keyboard — individually, in banks or in complete sets, depending on the capability of your synth. Sounds can be renamed, shifted about and generally manipulated at will.

If you have one or more synthesizers from manufacturers such as SIEL, Roland, Korg, Oberheim or Sequential, and have got tired of unreliable and boring tape dump routines, the disc-driven Data Base could be ideal for you. If you have a SIEL DK80, on the other hand, their Graphic Editor (which simulates a whole screen-load of knobs and switches for the largely knobless syntgh) will help you edit and create new sounds. Cursor or joystick-driven, it has high-quality graphics and can "zoom in" on several sections of the synth, including the envelope shapers and waveform generators.

The software includes a short sequence and chord pattern to test out your new sounds without actually playing the keyboard, and dumps a finished sound to any spare memory on the DK80 synth. If visuals help you find your way around the latest generation of single-control synths, the Graphic Editor and its like are ideal.

● **SIEL UK, AHED Depot, Reigate Rd, Hookwood, Horley, Surrey. Tel: 0293 776153/4.**

# Sample and hold!

*If Fairlight-type sound sampling effects intrigue you, but you don't have £20,000 to spare,* ***Chris Whitcombe*** *recommends Supersoft's Microvox Digital Sound Editor*

THOSE OF YOU who own music synthesisers, and indeed those that just like looking at such nice toys, cannot have failed to notice the technological advances that have been made in the relationship between computers and hi-tech keyboards. Now that the MIDI system has been universally accepted the combinations made possible are truly amazing, if not a little confusing sometimes! Synths can be played by one another, or by a "dummy' keyboard controller or, of course, by the computer using sequencer or multi-track recording programs. What more could one ask for? Well, you know how it is. You are fiddling with the algorithms on the DX7 wishing you could make it sound just a bit more like...whatever. If only you could 'lift' that sound off the record...you can, using a Digital Sound Sampler. Before

you start wondering where you can get a second mortgage, don't worry; samplers are getting cheaper, and better, all the time.

One such box of tricks is Andy Trott's MICROVOX, to be distributed by SUPERSOFT at a mere £230. Don't be fooled by the price tag. This is not a glorified Speech synthesis device that makes vaguely humanoid noises, but a fully-fledged MIDI-compatible monophonic sound and music sampler.

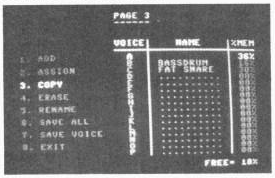
On the back of the unit are sockets for Audio In and Out, Midi In and Out and a ribbon cable for connection to the carriage port of the 64. The front panel has a GAIN control to adjust for signal inputs of varying levels (Mic/Line/Tape etc.), MIX for balancing source and sampled sounds, REPEAT for use in the Digital Delay mode and an OUTPUT level control.

## Digitised

All the on-screen choices and sample data are changed by just a handful of keys, so you won't get bogged down by masses of typing or by having to remember which key does what. Option 1 is the sampling page... not difficult to guess what happens here! The sound to be digitised is fed into the MICROVOX via the Audio In, and the GAIN control is used to adjust for maximum level (before overload of course!). You then set the THRESHOLD at which the sampler is to begin operating... this is so that you get a copy of the required noise, and not the sound of the cat eating its Munchy Chunks. GAIN and THRESHOLD both use Bar displays, so it's simplicity itself to get the right setting. Different sampling rates are available from a brisk 0.822 secs at 20KHZ to a leisurely 17.28 secs at 1KHZ. The quality is obviously best at the faster rates, but even at the lower and of the scale the results are quite good enough for speech. For most musical purposes, however, 1.6 secs @ 10KHZ is suggested.

Two Filters are included, one on Input and the other on Playback, to Boost or Cut the 'top-end'. Also included is a COMPANDER which you can use or not as you desire. When ON, it really does give (virtually) noise-free samples. At this stage you can, of course, LISTEN to the results of your efforts and approve them (or not) before moving on.

Page 2 is the Waveform Editor and, as well as drawing a pretty picture of your sound, also allows you to jigger about with it to your heart's content. Parts can be taken out, LOOPed, moved about, INVERTED, REFLECTED, FADEd IN and OUT and in order to help you position the Editing cursors accurately, you can enlarge a SEGMENT of the waveform so that you can see what you are doing. You can LISTEN to the sample again (without having to change screens) and when satisfied move on to the Voice Handler.




This screen includes a table which tells you what percentage of sampling memory you have left. If it's not all been used up, you can go back to square one and 'do' another sound or two. Here's where the real fun begins! Having filled the available memory space with samples, you can now 'layer' them together.

When you reach the PLAYBACK screen you will discover to your delight that you don't have to go out and buy that Keyboard Controller after all. Although you can (and the musicians amongst you probably would) use a synthesiser keyboard to play your samples, the computer itself can do the same job, using the keys to replay the sounds.

A Sequencer section allows the composer to allocate a sample (or samples) to differ ent notes and thereby build up a tune without the use of a keyboard. Screen 6 enables the user to assign sounds to specific keys on either the computer or synth (or controller) over 4 octaves. This means that you could, for instance, have 3 or 4 different drum sounds on adjacent keys. A Simmons Kit in one hand! The Special Effects page comprises a Digital Delay, being variable from zero up to the sampling time for the chosen bandwidth; REPEATS being varied by use of the front panel control.

## Channels

Option 8 from the Main Menu is for assigning the MICROVOX to any of the 16 MIDI channels; thus it can be controlled by any one of your myriad of synths or, indeed, from any Midi equipped Sequencer or Drum machine.

When you have finally got your sample as you would like it to be, you can SAVE it to disk, using the built-in Disk Handler (Option 9), for later retrieval. There's a nice touch here too. How many times do you go to a disk to save something, only to find that there isn't one that's been formatted and you have to lose what you were working on in order to do it? ('Be Prepared' I hear you Boy Scouts say...) Well, that won't happen with this little beauty as the routine has been included as one of the Options for forgetful people, like me.

As you may have realised (very shrewd are CH readers) I was very impressed... not to mention amazed, staggered and generally bowled over. It's GREAT. All the screens are, more or less, self-explanatory helping to make MICROVOX extremely user-friendly. The sampling quality is excellent, as is the whole product... and I'm going to buy one!!

By the time you read this (you did read it, didn't you?) MICROVOX should be readily available, courtesy of SUPERSOFT. If you want to find out more (or just have a fiddle with one) then try GIGSOUNDS in Catford where there should be one or two on display....and For Sale! ■

**Product:** Microvox digital sound and music sampler
**PRICE:** £230
**SUPERSOFT:** Winchester House, Canning Road, Wealdstone, Harrow, Middlesex, 01-861 1166
**GIGSOUNDS:** 22 Rushey Green, Catford, 01-690 8621

Casio CZ-101 owners will be excited to hear of Joreth's Tone Editor, a sound program storage program package for use with the Joreth MIDI interface. Review forthcoming; contact Joreth at PO Box 20, Evesham, Worcs.

# An Epson in Commodore clothing!

NOW AVAILABLE FOR KAGA-TAXAN/CANON

How many Commodore home computer owners, when faced with buying a printer, have longed to own an Epson but been put off by the problems involved? Firstly, it's not easy to connect the two together. Secondly, even when connected, it may be necessary to load driver software or the cartridge slot may be unusable. Finally Commodore-specific characteristics such as graphics and formatting commands will not be available.

Now Micro Control Systems have the solution. Just plug the Comprint circuit board inside the Epson, connect the cable supplied to the Serial I/O port on the Commodore computer and Hey Presto! The Comprint fools the Commodore into thinking it is working with a Commodore printer. All the features are there – total emulation. And it even provides a 2K buffer as well.

What's more all the additional features that have made Epson so successful, such as condenced print and other type styles, are accessible directly by the Commodore computer. For the business user the ability to use 15 inch paper (in the MX/RX/Fx-100 range) and print a £ sign (or other Epson special characters) will prove invaluable.

So go on – spoil yourself. If you are the owner of a Commodore personal computer treat yourself to an Epson – and a Comprint of course!

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"Undeniably an interface to look at" – *Commodore Computing Int., May 1985*

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There is already a new sound sample set in preparation which will contain over 40 new samples including Syn Drums, Latin percussion, Hand Claps and many more for only £16.50! All purchasers of the Syntron Digidrum will receive details of the new sound samples as they become available plus a FREE subscription to the SYNDROMIC USERBASE which includes a membership card and a FREE quarterly newspaper on computer music and computer musicians written by leading music and computer journalists. Please fill out and return the coupon below.

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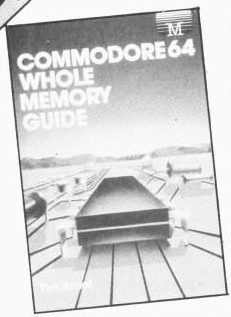


MELBOURNE HOUSE's Commodore programming books are among the most popular titles available for the machines — and now we're offering you the chance to get copies of the latest title hot off the presses, and save money too!

- Tim Arnot's *Commodore 64 Whole Memory Guide* is more than just a memory map — instead of just giving memory locations, it offers detailed descriptions of each location, explaining what it's for and how it can be used by the programmer. The book has three main sections; the RAM guide, the I/O guide, and the ROM guide, which includes a complete and annotated disassembly of the 64's ROMs.
- For Basic programmers, the book tells you how to use the system variables to gain control over your 64. For machine code programmers, *The Commodore 64 Whole Memory Guide* helps you to use the machine's subroutines, understand parameter passing, and cope with data errors.
- With appendices on variations in the kernal ROM, hex/dec conversion and ASCII codes, *The Commodore 64 Whole Memory Guide* is an essential purchase for serious programmers. The book costs £9.95 in the shops, but by arrangement with Melbourne House we are able to offer it at £7.95 including postage and packing, a saving of £2.
- To get your copy, fill in the form and post it to *Melbourne House Book Offer, Commodore Horizons, 12/13 Little Newport Street, London WC2H 7PP.* Please enclose payment by crossed cheque or postal order, not cash, made out to *Melbourne House Publishers Ltd.*

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# Reporting back

***Mike Hart's** utility program for the 64 and Vic serves three purposes — it counts lines, reports missing references and gives a byte total*

REPORTER is a machine language utility designed for the Commodore 64 and Vic 20 machines. The loader distinguishes between the two machines, and makes adjustments to ensure that the correct version is loaded.

When activated by a call to SYS 725, REPORTER will do three things. Firstly, it will report the number of lines in a program. Secondly, and of much more importance, it will check through the entire code to see if the program contains any unreferenced lines that might have been left behind (after a renumbering exercise for example). These lines may lurk hidden for a long time if they are only activated under error conditions, for example, or are contained in a little-used sub-routine. REPORTER will make use of the machine's own ROM routines to signify if an unreferenced line exists by the standard message 'UNDEF'D STATEMENT ERROR IN' line-number. The tokens specifically checked for within the program are the following: GOTO, GO TO, GOSUB, THEN, and RUN.

However, LIST is not checked for as this command would still work effectively even if the referenced lines did not exist.

## Kilobytes

If all of the line references are correct then the program will report LINE REFS OK. Finally, the routine will compute the number of bytes in the program, and will report this number both in bytes and also as kilobytes i.e. bytes divided by 1024. In this process, the program will count the line terminating 0 at the end of the last line but will not include the two zeros which the CBM uses in addition to signify the end of a program. Otherwise an empty machine would register a program of length 2 which is somewhat anomalous. If there is no program in the machine then REPORTER will signify NULL — this can be verified by a NEW followed by the SYS call.

REPORTER actually loads into two locations in memory. The main portion of the program (which is quite relocatable) is situated in the top ¼K of RAM at the top of memory and then protected by lowering the top of memory pointers. The message table is located in a different area, locations $02A8-$02D7, which is generally safe in both VICS and the C-64. This then allows the main program to call the message table by references to absolute addresses in RAM, and this considerably aids the case with which the whole program can be relocated. The start address is the top-of-memory, and this is accessed always by a call to SYS 725 containing the code 6C 37 00, i.e. an indirect call to top of memory. ■

## REPORTER

```
1 REM *** REPORTER ***
2 :
3 REM ** MIKE HART **
4 :
5 REM ==  SYS 725 TO ACTIVATE  ==
6 :
7 REM ==  CODE LOCATES ITSELF  ==
8 REM ==  AT TOP OF MEMORY ..  ==
9 REM == AND $02A8-$02D7 (SAFE)==
10 :
11 REM == VERSION FOR C-64 AND VICS ==
12 REM ==  (WORKS EQUALLY ON BOTH)  ==
13 :
15 POKE 56,PEEK(56)-4:CLR
20 T=PEEK(55)+256*PEEK(56)
25 V=0:IF PEEK(246)=236 THEN V=1
30 :
35 FOR J=0 TO 216:READ X:IF X>=0 THEN 45
40 X=ABS(X):IF V=1 THEN X=X+32
45 POKE T+J,X:NEXT
50 :
55 FOR J=0 TO 47:READ X:IF X>=0 THEN 65
60 X=ABS(X):IF V=1 THEN X=X+32
65 POKE 680+J,X:NEXT
70 END
75 :
100 DATA 165,44,133,123,169,0,133,122
101 DATA 133,251,133,252,160,0,177,122
102 DATA 208,37,230,251,208,2,230,252
103 DATA 200,177,122,200,17,122,240,75
104 DATA 200,177,122,133,57,200,177,122
105 DATA 133,58,24,169,5,101,122,133
106 DATA 122,144,217,230,123,176,213,201
107 DATA 141,240,32,201,137,240,28,201
108 DATA 167,240,24,201,138,240,20,201
109 DATA 203,240,8,230,122,208,189,230
110 DATA 123,208,185,230,122,230,122,208
111 DATA 2,230,123,32,115,0,176,215
112 DATA 32,107,-169,32,19,-166,176,164
113 DATA 76,227,-168,32,215,-170,165,251
114 DATA 170,201,1,240,92,166,251,208
115 DATA 2,198,252,202,134,251,165,252
116 DATA 32,205,-189,169,168,160,2,32
117 DATA 208,2,32,215,-170,169,175,160
118 DATA 2,32,208,2,56,165,122,229
119 DATA 43,170,165,123,229,44,168,232
120 DATA 208,1,200,152,134,253,133,254
121 DATA 32,205,-189,169,189,160,2,32
122 DATA 208,2,164,253,165,254,32,145
123 DATA -179,32,12,-188,160,0,169,4
124 DATA 32,145,-179,32,20,-187,32,215
125 DATA -189,169,198,160,2,32,208,2
126 DATA 96,169,202,160,2,32,208,2,96
127 :
128 DATA 32,76,73,78,69,83,0,76
129 DATA 73,78,69,32,82,69,70,83
130 DATA 32,79,75,13,0,32,68,69
131 DATA 84,69,83,32,32,0,32,75
132 DATA 13,0,78,85,76,76,13,0
133 DATA 32,30,-171,96,0,108,55,0
```

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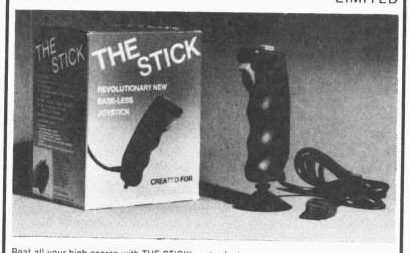


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# Practical printing

I AM considering buying an Epson RX80 F/T for use with my CBM 64. Which hardware of software interface is the most suitable? I wish to use both **Easy Script** and **Practicalc 2**; what are Practicalc's graphics capabilities? And what are your views on the Datastar SG10 printer compared to the RX80 and the new LX version?
*R G Hewison*
*Downend*
*Bristol*

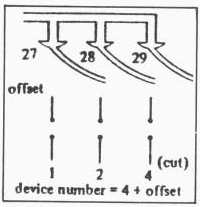
**WHEN ORDERING your Epson, specify that it is to be used with the 64, and it can be supplied with the correct interface built in. Practicalc 2 has a graph plotting mode both in hi-res and low-res. Figures can be converted into bar graphs (histograms), and you can use UPPER/LOWER CASE or UPPER CASE/GRAPHICS modes.**

**The Datastar SG10 is fully Commodore compatible, with near-letter quality function, true descenders, and 110 cps speed in normal print mode. It has fraction or tractor feed and costs £297.85 inc. VAT. For more details I suggest you contact Datastar Systems, Unicom House, 182 Royal College Street, London NW1, 01-482 1711. I have not tried the SG10 myself — perhaps an owner can pass on some comments?**

# Channel four

I OWN A CBM 64 and have Simon's Basic. I later bought the CBM 1520 printer/plotter, and find that it doesn't respond to print commands from Simon's Basic, because the 1520 is set to channel 6 rather than 4. Is there any way of running the two together? And can I change the 1520's character set? And where can I buy the pens separately?
*S B Hayden*
*Sheffield*

**THE 1520 can be changed to device number 4 as per the diagram below (reproduced from the original American plotter manual). The pens can be purchased from Tandy stores (they distribute a printer which uses the same pens). Yes, the 1520 has a hi-res mode, so you can create and print out your own user-defined characters by following the instructions given in the manual.**




# Reset revived

WHILE LOOKING at the September issue of *Commodore Horizons*, I came across a small program for the 64 which enabled programs to be listed after a reset switch had been pressed. I own a Vic 20 and have made a reset switch, and I was wondering if there was any possible way of converting the program to run on the Vic.
*N Spanswick*
*Devizes*
*Wilts*

**I HAVE converted the 64 program, but please note that the original program had a 165 missing in line 50 (see October's letters page).**

**The program has to allow for the different starting positions of Basic in different Vic configurations. In line 50 the second item of DATA will read 16 for the unexpanded Vic, 4 for the 3K Vic and 18 for any other.**

```
10 for Ø to 25
20 READ BYTE
30 POKE 740 + C, BYTE
40 NEXT C
50 DATA
169,16,160,1,145,43,32,51,
197,165,34,133,45,133,47,133,
49,165,35,133,46
60 DATA 133,48,133,50,96
```

**Use SYS 740 to activate.**

# C16 set-up suggestion

I HAVE RECENTLY found a program which allows you to redefine the character set of the Vic 20. Can you tell me how to modify it for the C16?
*M Lethrope*
*Leyland*
*Lancs*

**BEFORE you can make any real use of such a program, part or all of the character set in ROM should be transferred to RAM. Because of limitations in memory size, I suggest that the uppercase set (2K) only is transferred.**

**The simplest and fastest way on the C16 is to use the inbuilt machine language monitor. Type MONITOR and press RETURN, then enter DOOOO D7FF 3800 (RETURN). Exit the monitor by typing X.**

**Then use the following program;**

```
10 DATA
0,254,124,56,16,16,65,0
20 TRAP 10000
30 FOR A = 14336 TO 14343
40 READ B
50 POKE A,B
60 NEXT A
70 C = 65298:POKE C,
PEEK(C) and 251
80 POKE 65299,56:POKE
52,55:POKE 56,55
90 REM restoring of the normal
set follows — use END if this
is not required
10000 POKE 65299,208: POKE
65298,PEEK(65298)OR4
10010 SCNCLR
10020 PRINT ERR$(ER),EL
10030 END
```

**Recommended reading: *The Working C16* by David Lawrence, published by Sunshine Books at £6.95.**

# Memtop muddle

I HAVE TRIED every combination I can think of so that I can move the memory/pointers to use my own character set on my Vic20 using a 16K expansion. I am absolutely stuck with this — can you help?
*S. Bissell,*
*Stockport*
*Cheshire*

**A PROGRAM to give room for 64 characters was printed in the July issue. The text gave the values as $7168, and this should have been decimal (as in the program listed). The first part of the answer, as far as OR 2*X, was for the 64, and the remainder for the Vic 20. A program for the Vic 20 with 16K expansion, which copies 128 characters from ROM to RAM, follows;**

```
10 for I = $ TO 1023: POKE
6144 + I, PEEK(32768 + 1):
NEXT
20 POKE 36869,254: POKE
648,30: POKE 38666,150
30 POKE 56,(6144/256):CLR
```

**change the first character definition with;**

```
40 FOR I = Ø TO 7: READ A:
POKE 6144 + I, A: NEXT
50 DATA.....
```

**as required.**

# Saving grace

I WOULD like to know if there is a way of saving a program without the computer printing the message SAVING . . .
*S A Berry*
*Legbourne*
*Lincs*

**YES, IF THE program is written in machine code, and the code loaded in such a way that the first instruction executed while still loading is the equivalent of POKE 53265,27, which restores the screen. Try POKE 53265,11 to blank the screen, and POKE 53265,27 to restore. Saving a program from within itself will turn off screen messages (tape or disk) but make it the last line, say 1000, and use RUN 1000.**

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WANTED! COMPUTER pals for software starved CBM64 tape user. Interested in adventuring, wargaming, good music and graphics, etc. Swaps available write or send tape to Axel Bürhmann, 77A High Street, Grahamstown, South Africa for instant reply.

WANTED: "Inside Commodore DOS" from Prentice Hall and "Anatomy of the 1541" by First Publishing. AM also interested in other books about the 1541 drive. Good prices paid. Phone now! Mike on 0558 822509.

WANTED: Mega Transfer Disk, Super Breaker, Oxford Pascal, Adults Only, Girls Want to Have Fun: all with copies of manual. Swap material: 800 titles; Easy Script, Multiplan, Super Base. Write: Peter Beschrijver, Schuurveldlaan 16, 2610, Wilrijk, Belgium.

WANTED! Disk drive for Vic-20. Must be working and cheap, preferably with some software and disks. Write to Steven Miles 36 Castle Gardens, Limavady, Co. Londonderry, N. Ireland or phone 05057 65797 (after 4pm).

HELP! PLEASE SEND complete solution of 20RKI. I have 259 points. Write to P. Visser, Parestraat 245, 974377 Groningen, Holland or call 050-136246.

HELP! COULD ANYBODY help me on screen one on Supergran for the C16. If so ring 703 4591, only on Tuesday, ask for Terry Burton.

I HAVE original software on disk and tape to sell cheap. S.A.E. for list and prices. Also wanted Centronics Interface. Write to: T. Beal, "The Cottage", Mains of Charleston, Nigg, Aberdeen AB1 4LP.

WANTED: I'm searching for games on tape for C64. I'm looking also for Skyfox on tape. Please send a list to: Patrick Zucker, Lanstr. 45, 625A Waldbrunn 2, West Germany. All letters answered.

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WANTED Vic-20 cartridges. I am looking for Programmers Aid and machine code cartridges, also Voodoo Castle and Adventureland. Will swap for cartridges, cassettes, books, magazines. Please write: Chris Matson, 7 Upsall Road, Butterwick, Boston, Lincs. PE22 0HH.

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CBM64 Simon's Basic to swap. Would like Summer Games plus Scrabble or Summer Games plus any 2, Scrabble plus any 2. Iain Geddes, 34 Fettes Way, Montrose DD109 or phone 0674 75231.

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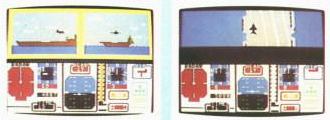

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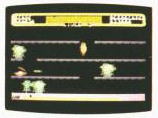

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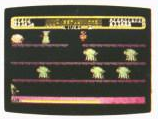

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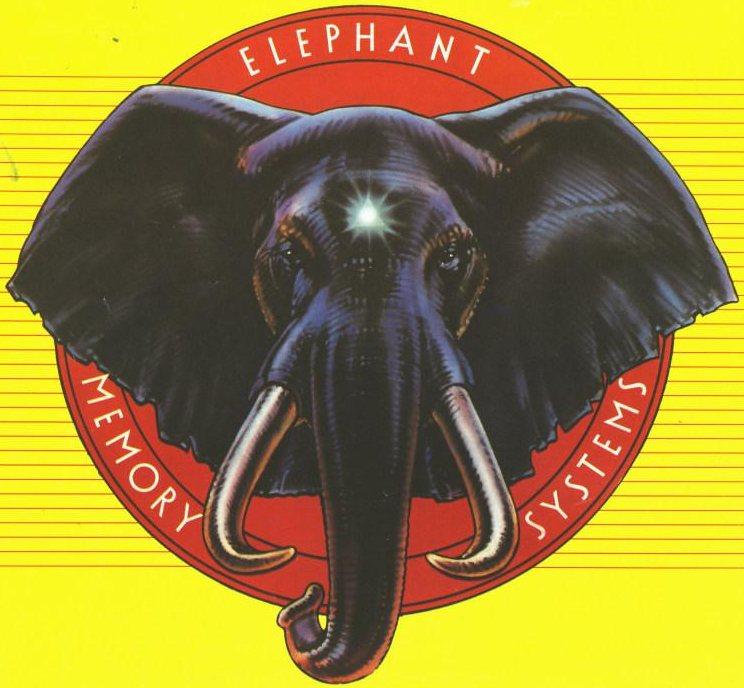

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